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AND  
MAGAZINE OF MORAL SCIENCE.

VOL. XX.—No. XCI.

PUBLISHED QUARTERLY.

Quiconque a une trop haute idée de la bonté et de la justice de son raisonnement pour se croire obligé de les soumettre à une expérience mille et mille fois répétée, ne perfectionnera jamais la physiologie du cerveau. — GALL.

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THE  
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FOR THE YEAR 1847.

**VOL. XX.**

OR  
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The first business of philosophy is to account for things as they are; and our theories will do this, they ought not to be the ground of any practical conclusion.—MALTHUS.

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THE  
PHRENOLOGICAL JOURNAL

No. XCI.

APRIL, 1847.

NEW SERIES.—No. XXXVIII.

**I. MISCELLANEOUS PAPERS.**

*I.—On the True Scientific Spirit in which the Claims of Phrenology and Mesmerism ought to be examined.*

It cannot be denied, that, in the present day, knowledge is more generally diffused, and education, as far as acquaintance with natural science, more rational, than in the case a hundred years ago, or even at the commencement of the present century. But it is equally certain, that the knowledge existing generally in society is lamentably deficient, and that the scientific part of modern education is very imperfect, or has not yet had time to produce a very notable effect on the public mind. To convince the world of this, it is only necessary to study the reception given to new truths, or to statements professing to be truths, founded on careful and accurate observation.

We are ready enough to refer to the absurd conduct of those who refused to look through the telescope of Galileo, and see with their own eyes those discoveries which he denied; and of those who could think that a compulsory assent to an opinion founded on observation, and refuted by observation, was either desirable or even necessary, unless as a direct encouragement of falsehood. In contrast with such conduct the reception lately given to the beautiful discovery of Leverrier, by which the linearity of our system has been doubled. And it is no doubt that the great truths of astronomy have been so strongly pressed on the public mind, that an extension of our knowledge, in conformity with our notions of those truths is readily admitted.

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But the true question is this,—How do we receive *new truths*? that is, truths involving principles different from those which we acknowledge. How should we receive, for example, the announcement of a doctrine of the universe, as different from that of Newton as Newton's was from those of his predecessors! It is much to be dreaded, that a candid answer to this question would indicate a line of conduct not very remote from that of the opponents of Galileo, of Newton, or of Harvey.

It would appear that the human mind has usually opposed an instinctive resistance, a *vis inertia*, to the progress of new ideas. Many of us can recollect, that when gas was first introduced, Walter Scott spoke and wrote of the idea as that of a visionary, and yet, before thirty years had passed, he had a gas factory at Abbotsford, and was chairman of the Edinburgh Oil-Gas Company. Here, a man of a sagacious and practical turn of mind recoiled from a great practical improvement, apparently for no other reason but that the idea was new to him. Even the history of railways, at a still later period, can furnish an entirely parallel case; and the same may be said of steaming across the Atlantic.

If, then, where the point in dispute is so eminently practical, the first impulse be to reject the new, this is much more likely to be the case where the new doctrine treats of matters not lying on the surface, and where a personal knowledge and conviction of the truth can hardly be obtained without laborious study and observation. If, in addition, the new doctrine should clash, or should appear to clash, with established views on points on which the feelings are apt to be excited and interested, we may reckon with absolute certainty, even in the middle of the nineteenth century, on an opposition to it, very similar to that which might have been experienced in the sixteenth,—equally vehement, and, inasmuch as it originates from the passions and not from the intellect, equally unreasoning.

The reception of Phrenology by the contemporaries of Gall was a case in point. Without an attempt to verify or disprove his statements by observation, his whole doctrine was at once rejected, and he, the patient, unwearied, and sincere student of nature, was stigmatized as a quack by men who had never even looked at a brain or skull, with a view to discover the relation they might bear to the mental manifestations. Nay, an authority, yet living, who certainly was not in the habit of making physiological or anatomical investigations, actually went so far as to declare, that "there is not the smallest reason for supposing that the mind ever operates through the agency of any material organs, except

### *Phrenology and Mesmerism.*

in its perception of material objects, or in the spontaneous movements of the body which it inhabits." \*

The opposition to Phrenology, on the part of Gall's contemporaries, has all the characters above alluded to. Like the opponents of Galileo, those of Gall refused to look through his telescope; but thought themselves, nevertheless, justified in denying his statements of facts, and in accusing him of quackery and imposture. In place of arguments founded on independent observation, the only legitimate answer to statements of facts founded on observation, they attempted to pull him down by reasonings *a priori*, founded on what they chose to assume as the order of nature, or by attributing to his doctrine certain consequences inconsistent with their views of ethics and of religion; as if any doctrine truly deduced from natural facts, could be inconsistent with true religion or true morals; or as if, supposing the doctrine to be illogically deduced from the facts, or the facts to be erroneously assumed as such, the proper method of meeting it could possibly be by reasonings, either *a priori* or to consequences. They forgot that both these false modes of reasoning were employed against Galileo and the other discoverers above alluded to, and that the Bible was then supposed to declare that the sun really moved round the earth.

It is not in the least material to this question, whether Phrenology be true or false. Whether true or false, it appeals to facts and to nature; and no such appeal, whatever be the doctrine legitimately deduced from it, can be properly or even fairly met, except by a similar appeal to facts. Now when we look at the history of the various attacks made on Phrenology, we find that they are almost uniformly characterised by the entire absence of facts or observations, well as by the prevalence of the argument *a priori*, or the argument from the supposed consequences of the doctrine. The very few attempts at a refutation of Gall's doctrine by means of observation, which have appeared, have been either ludicrously self-contradictory, or else founded on a total misapprehension of the doctrine to be refuted. At all events they have not been successful, since each successive phrenologist has rejected the refutations of all his predecessors, and has been in turn rejected as insufficient by his successors.

If we endeavour to account for the fact, that new truths or statements of fact involving new principles, whether such statements be correct or not, are met, as they would have been two or three centuries since, not by an appeal to nature

\* Edinburgh Review, vol. xlii., p. 267.

curacy to its origin, we are compelled to  
boasted education is grossly defective in this  
the young seldom receive any instruction  
them to judge of the evidence produced by a  
support of his views of natural truth. Not  
what constitutes evidence of a natural fact,  
ful that men should come to very different  
respect to the inferences to be drawn from  
all were duly trained to appreciate evidence  
science, they would, when a new subject was  
them, speedily come to a common decision  
and from these the inferences would follow  
course, and all the time would be saved which  
thrown away in disputes that could not occur  
ants knew the laws of evidence in natural science.

It would be easy to quote many examples of  
able form of opposition to Phrenology, or of the  
above mentioned ignorance of what constitutes  
natural science. But the chief object of the present  
draw attention to another instance of the same  
producing the very same result, namely, a  
biased opposition to new ideas, in the case of

Mesmerism, like Phrenology, is essentially  
facts, or of what are, at least, alleged to be  
merism, as in Phrenology, the observers decide  
have seen, and appeal to nature; while in Mesmerism  
Phrenology, many individuals, without appealing  
without making a single observation, unhesitatingly  
the alleged facts to be no facts, and the observers  
dupes or impostors.

Now, in Mesmerism as in Phrenology, it is of the  
est importance in reference to the present question



the observers of incapacity or of fraud, unless these assertions are made good by an appeal to facts. And yet such is the staple of the opposition to Mesmerism.

One chief cause of this must be sought in the same want of accurate notions as to what constitutes evidence in natural science, to which we have referred the principal part of the opposition to Phrenology. Let us, therefore, endeavour to trace the process, that we may discover the fallacy or fallacies which must exist somewhere, to account for the circumstance that, while, on the one hand, statements of fact are made by those who profess to have observed them, and who appeal to nature, maintaining that every man may, if he choose, observe them for himself; on the other, these alleged facts are contemptuously rejected on a variety of grounds, but certainly without the objectors having, as they ought to have done, investigated the matter experimentally for themselves. We say that some fallacy or fallacies must exist here to lead to so strange a mode of treating a question of fact; and that if we can trace it, we shall probably find it to be the same which operated in producing precisely similar conduct on the part of the opponents of Copernicus, Galileo, Newton, Harvey, and Gall.

We do not here proceed on the assumption that what is called, in general, Mesmerism, is true. We only maintain that, whether true or false, it appeals to fact, and has been met by every kind of opposition except the only legitimate one in such a case, namely, a fair appeal to fact on the part of the objector.

If we take the accounts of the mesmeric phenomena from the modern writers on the subject, we find that they may be divided or classified into several states or stages, which are not always found to occur in the same individual—sometimes one only appearing, sometimes another, and sometimes two or three in succession.

The first of these is the mesmeric sleep, passing, in many individuals, into sleepwaking or somnambulism. Indeed the latter may almost be described as a distinct stage. It is, however, very closely connected with simple mesmeric sleep, and in many cases is the first stage observed.

In the next stage, the subject, still asleep, and commonly with shut eyes, can readily communicate with his mesmeriser, and often exhibits attachment to him, often also sympathy with him, with or without contact, so as only to hear, or, at least, to notice, *his* voice, &c. In this stage, if not in the former, the subject frequently exhibits insensibility to pain (though this is far from uniform), and community of taste.

predicts accurately the course of his own times exhibits a like power with reference to others.

As a general rule, in simple somnambulism the higher stages, the consciousness of the difference from that of his ordinary state, in which I have mentioned his mesmeric proceedings. But, as the phenomena, so in this, there is great variety in part, others the whole, of what occurs may here be mentioned generally, but it is particularly alluded to hereafter, that the variety of phenomena is so great that not only no two experiments yield exactly the same result, but even at different times, may exhibit very different results.

Now, there is nothing in such statements to deprive them of the benefit of the ordinary scientific investigation. They are surely such as can be proved true, or disproved, if false, by experiment, and this would appear to be the only legitimate method of meeting them. Let us see, then, how far the scientific method has or has not adopted it.

1. The first objection commonly urged against the phenomena, such as those of clairvoyance, is that they are incredible, and must therefore be rejected; from this proposition, it is also maintained that those who profess to have observed such phenomena are either themselves impostors, or the dupes of fraud or deception on the subjects of their observations.

To any one accustomed to scientific research it is obvious that such a mode of getting rid of objections cannot be called argument, is altogether u



ratio to that which is unknown, as the science of Newton, in his own opinion, did to the vast mass of undiscovered truth, when he compared himself to a child picking up pebbles on the sea-shore. Secondly, It assumes the right to deny the *bona fides* or capacity of the observer, merely because we cannot account for the facts to which he testifies. Now, in reference to this point, it may be safely laid down that the *bona fides* of an observer is on no account to be denied, unless his previous conduct have given good grounds for doing so. And it is more especially our duty to give every observer credit for truth and honesty, when the facts he states are such as may easily be ascertained by experiment. To act otherwise, is to infringe, in the most direct and inexcusable manner, the Divine precept, "Whatsoever ye would that men should do unto you, do ye even so unto them." The generation now passing away had a striking lesson on this duty in the history of Bruce of Kinnaird, the Abyssinian Traveller, whose statements of facts, to which he was eye-witness, were contemptuously classed with travellers' tales, although the truth and candour of Bruce were previously unimpeached, merely because these statements were startling, and the authorities of the day chose to consider the facts impossible. The lapse of time, however, has shewn that Bruce had strictly adhered to truth in all his statements; which have been fully confirmed, even where apparently most improbable, by subsequent travellers in Abyssinia. No one now hesitates to admit that those who accused Bruce of *mala fides* were alike deficient in justice and in logic; and the same judgment is impending over those who have accused the writers on Mesmerism of fraud, merely because the facts they described could not be explained or accounted for.

Here it may be observed, that there is a remarkable tendency in the human mind to be satisfied with any thing which wears the aspect of an explanation of natural truth, even where, in reality, nothing is explained and nothing accounted for. It is easy to find many persons who attach great importance to Newton's law of gravitation, not because it enables us to classify the facts, to remember the law according to which they occur, and with the aid of that law to predict new facts occurring under it, but as *accounting* for the phenomena, as *explaining why* bodies attract each other. It is not, then, very wonderful, that those who suppose that they are accounting for gravitation, when they are merely stating the facts in a connected form, or, in other words, the law according to which, and not the cause in consequence of which, they take place; it is not, we say, wonderful that

procured, although we can measure the force of the current. Who can tell how a copper wire, in contact with electricity or of heat, becomes a magnetic force of the current be measurable, or why or how an acid and an alkali neutralize each other, although we can measure the force of the reaction? If we look where we may, we shall find that all natural phenomena quite unknown to the ancients, on that account, deny the facts of life, sense, and of astronomy, magnetism, electricity, and so on. Still less do we accuse the observers of *mala fides*, because we cannot explain them. As Mr. Bruce said, "but these facts are obvious to our eyes, and we cannot deny what we see." But it must not be these very facts, or many of them—for the facts of astronomy—were actually long denied, and it is only by denying their obviousness. And, on the other hand, the facts of Mesmerism appeal to nature, and as there you will find it impossible to deny Mesmerism, just as you find it impossible to deny the facts of electro-magnetism, strange and unaccountable. Now we maintain that such an appeal can be made only by sheer denial of the facts, or in any other way than by appeal to observation; which, if the facts are not true facts, must be a very short answer.

In reference to the first objection, then, that it is no valid answer to statements of fact to say that the higher phenomena are in the realm of the impossible, that the difficulty or impossibility of accounting for them does not entitle us, any more than it did Mr. Bruce, to accuse of *mala fides* observers who are honestly and honestly unimpeached.

dicting future events. It is also said, that the unbounded influence acquired by the mesmeriser over his patient is most dangerous, and capable of being perverted to the worst purposes.

In considering objections of this class, the first thing that strikes us is, that the existence of any real fear of bad consequences implies belief of the facts themselves. We cannot fear the perversion of that the existence of which we deny. If, therefore, Mesmerism be altogether the result of fraud and imposture, these evil consequences must be imaginary. If, on the other hand, the facts be admitted, as they must be by those who sincerely dread such consequences, then we maintain that, in all questions of natural fact, we are entitled only to ask, "Is this true?" "Does it exist?" and not, "What are its consequences?" If the alleged fact be true, it must be the work of God; for human nature can possess no powers which are not derived from Him. This being the case, the dread of evil consequences argues an imperfect acquaintance with His works, and should rather act as an additional inducement to us to investigate these obscure phenomena, than lead us to neglect the additional knowledge to be obtained by such researches.

With regard to the influence of the mesmeriser over his patient, in some cases it appears to be great, in others limited, in others again it is absent. The abuse of this power can only be dreaded by those who admit its existence, and there is no reason to suppose that it is more liable to abuse than other powers or agencies, none of which are exempt from the liability to abuse. The best security, in all such cases, is not ignorance but knowledge.

In reference, therefore, to this second class of objections, it is plain, that, where entertained, they can only be so by those who admit the facts; and it is equally obvious, that to reason against a natural fact from its supposed evil consequences, is contrary to all the rules of scientific research, which, in all cases where *facts* appear to lead to evil results, prescribe, not a denial or oblivion of the facts, but a more diligent study of them, in the conviction that no natural truth, when fully understood, can be otherwise than beneficial to mankind.

3. Another class of objections, on which great stress is laid, is that drawn from failures in mesmeric experiments.

Here it must be observed, in the first place, that one well-attested instance of success will overbalance, as evidence, hundreds or even thousands of failures, which, in that case, can only prove at the utmost, that we are not sufficiently

familiar with the conditions of success. To borrow an illustration from another department of science—when a chemist of known accuracy, announces the discovery of a new and remarkable compound, and describes a process for its production, and when other chemists, on first repeating the process, fail to obtain the desired result, they do not conclude that the statement is false, but simply, either that the necessary conditions have not been described with sufficient minuteness, or else that they have neglected some one or more of these conditions; and they repeat the experiment till it succeeds, or apply to the discoverer for more detailed instructions. This happens every day in chemistry; but what would be thought of a chemist who should refuse to try the experiment, and yet consider himself justified in denying the truth of the discovery, and accusing his brother chemist of imposture, because it appeared to him impossible, or because he could not account for it?

But, in the second place, when we consider the special case of Mesmerism, we perceive many reasons why failure in obtaining certain results is a circumstance of even less weight and importance than in such a science as chemistry. In mesmeric experiments, the conditions of success are much less known. From the very nature of the subject of experiment, namely, the living nervous system, it is far more exposed to variations arising from causes apparently slight, but in reality only imperfectly studied, than the dead subjects of chemical research. There are many experiments even in chemistry, in which a difference of a few degrees in temperature will cause utter failure. How much more probable is it, then, that the nervous system should be affected by a great variety of causes of uncertainty and failure! Everyone knows in his own experience, that the mental powers, and indeed the bodily powers also, are not at all times alike. The poet is not always able to rhyme, nor the musician to compose, with equal success; and the slightest variations in the state of health, especially in nervous temperaments, produce corresponding variations of mood or humour, as it is called. Why, then, should it appear strange that the powers possessed by individuals in the mesmeric state should vary at different times? Ought we not rather to expect that which, according to all writers on Mesmerism, actually occurs—namely, that the mesmerised person shall at one time possess powers which at another time are absent? It would indeed be strange if mesmeric phenomena alone exhibited a uniformity never seen in the other phenomena of the nervous system.

But further, there are other causes of failure, to which mes-



meric experiments are peculiarly liable. The first of these is a consequence of ignorance on the part of the experimenter, of the facts just alluded to, and of a confidence in the results, which, if not justified to the full extent by a careful study of the subject, is, at least, a strong indication of the *bona fides* of the observer. We allude here to the boldness with which those who have once obtained certain results in a given case, undertake, even in public, to exhibit and demonstrate the same results, and thus to convince sceptics. Now, these bold exhibitors, in many cases, not only do not practically attend to the considerations above stated as rendering occasional failure possible, but, also, neglect other considerations which render it even probable. Of these the most important are, the exhaustion of the subject, the arbitrary alteration of the conditions of experiment, and the effect, on the mesmerised subject, of the proximity of many persons, or indeed of persons other than the mesmeriser, and especially of the sceptical and uncandid.

It frequently happens, at exhibitions of mesmeric phenomena, whether public or private, that certain experiments, requiring the full powers of the individual, are tried when he is already exhausted by a long series of efforts, and when, therefore, his answers are more or less unsatisfactory. This cause of failure is obvious and easily avoided; but there is another which is less so; we mean the arbitrary alteration of the conditions of experiments. For instance, we shall suppose that an individual is said, when mesmerised, to acquire the power of *reading* a closed letter, or the page of a book covered with twenty other pages, or the dial-plate of a watch laid on the epigastrium, or held near the occiput. The experiment is tried, and succeeds; but a sceptic starts up and declares that he, for one, is determined not to be taken in; that, in the experiment just performed, collusion and imposture were *possible*; and if he does not actually assert them to have been employed, he gives it to be understood pretty plainly that such is his opinion. He will not, he says, be satisfied, unless the clairvoyant shall read a letter inclosed in several folds of paper, and shut up within a box, perhaps in the inner one of two boxes; or else he insists that the eyes of the clairvoyant shall be closed with strips of adhesive plaster, and bandaged in half a dozen towels and handkerchiefs, with the aid of pledgets of cotton wool. Without this, he will not believe; the mesmeriser and his clairvoyant, without having ever tried the proposed method, at once agree to his preposterous demand (a striking proof, by the way, of *bona fides* on their part); and the experiment now fails, as was



shut, and does not mind an additional obstacle. The sceptic takes a most erroneous view of the experimenter in scientific research, who observe and record the phenomena present, whether by simple observation or by experiment. He has no right to dictate to Nature the conditions she must exhibit a fact. He is at perfect liberty in the form of experiment he chooses; but he is, above all, bound, to study the fact, *as presented*. To return to our case—he may try as he pleases, and on any conditions, however absurd, that he chooses to impose; but he is not to say that his belief, or that of others, depends, on the fulfilment of these conditions; but to study the case under the natural conditions under which the fact was first observed.

Mesmerism agree in this, that a patient may be cured when his eyes are shut, and the object perceived is behind his head; but it is now he is certain to succeed if, in addition, his eyes are closed and loaded with bandages, in the way recorded by the found sceptics. Indeed, were such a statement we should instinctively reject it as absurd. It is that the horrid discomfort of such a blinding operation have any other than a most injurious effect on the patient! That, in some such cases, the effect succeed, in spite of the obstacles thus unwarped against them, only shews that some patients are annoyed or disturbed than others. We must not think it is quite possible that *any* change in the cause failure, and that, at all events, to prove the point, *before trying the experiment*.

compelled to say that such varied experiment would not succeed. Failures of this kind, therefore, only prove the rash confidence of the exhibitor, and, while they speak in favour of his *bona fides*, they argue a very limited acquaintance (such as we fear is too common among exhibitors of Mesmerism) with the phenomena which he professes to demonstrate.

There is entire unanimity among the chief authorities on Mesmerism in regard to this—that the proximity of other persons besides the mesmeriser, produces in many patients a degree of disturbance highly unfavourable to the successful exhibition of the higher powers; and that this is particularly observed when the patient is in proximity to a person in a sceptical, above all, in an uncandid frame of mind;—that, for example, the approach of a person who is convinced that the patient is guilty of fraud, and has probably expressed this opinion to the company, will often deprive a clairvoyant of his whole power. Nay, it is stated by all writers on the subject that the patient will often detect this state of mind in those with whom he is placed “*en rapport*,” although it has been concealed from all. Deleuze mentions a very striking instance of this, where the sceptic, finding that his secret thoughts, thus read, acted as an impediment to the further exercise of clairvoyance, became convinced that imposture could not account for this, and, investigating the matter for himself, became a distinguished mesmerist. But it is sufficient here to state that such is the uniform testimony of all the authors on the subject. Now, this being the case, it is plain that a very large proportion of public failures must admit of being thus explained; or at least, that those who state the fact as we have here given it, would be entitled, on their own principles, to predict numerous cases of failure under such circumstances. Such failures, therefore, if they prove anything at all, prove the truth of Mesmerism, by demonstrating one of the most curious mesmeric phenomena, namely, the alleged power of penetrating the thoughts and sentiments of others,—or, as it may be called, occult mental sympathy, and the extreme sensitiveness of the mesmerised patients. Of course we understand that the failure shall be distinctly traced to this cause, as in the case mentioned by Deleuze.

These considerations are not to be regarded as *ex post facto* attempts to explain failures. We offer them, on the contrary, as views deduced from the writings of the best authorities on Mesmerism, which would lead us, *a priori*, to contemplate the probability of numerous failures in experiments performed under the circumstances we have mentioned; and which, so

nomena of Mesmerism are subject to frequent variations.

The conditions of success being much less than in other experimental sciences, mesmeric experiments are more liable to failure than others.

The exhibitors of mesmeric phenomena, ignorant or not attending to it, expose themselves to failure by not taking to perform exactly what they have performed.

The patient may vary in his power on different occasions, from slight changes in his health, or from extraneous influences; and in all these ways failure may take place.

Again, the sceptic often unwarrantably dictates the conditions of experiment, which are rashly accepted, and is the result.

Lastly, the proximity of persons in a sceptical state of mind, or persons in an uncandid, prejudiced state of mind, has a most unfavourable influence on many subjects; and many failures are thus accounted for.

But even supposing that failures should occur, and that no explanation in any of the above ways, is discoverable, it is indisputable that the evidence derived from a single experiment carefully observed and accurately recorded, outweighs that deduced from a hundred of failures, which can at most prove that we can do no more than others have done.

It is hardly necessary here to do more than mention a few cases of alleged failure, in which the only cause has been the extravagant and unreasonable expectations of the experimenter or of the sceptic. A sceptic who doubts the account of the mesmeric phenomena exhibited, and having, perhaps, soon after, the opportu-

### *Phrenology and Mesmerism.*

what may be called lay sceptics, that is, sceptics with scientific training, it is difficult to imagine the extent to which bad logic can be pushed. Yet nothing is so common as to hear a person ask, as a test of truth, on being told that another has been thrown into the mesmeric sleep, "Is he clairvoyant?" and nothing is so difficult as to convince a person that a patient may experience the mesmeric sleep without possessing a trace of clairvoyance, or even of insensibility to pain. But we can hardly be surprised that sceptics should reason thus, when we find a medical man asking of a patient who was said to exhibit insensibility to pain or some other mesmeric phenomenon, "Does he rise with his belly?"—as if any writer on Mesmerism had ever stated, or even hinted, that each patient must exhibit some higher phenomena or all the phenomena; or, as if the truth of one depended on the existence of the other.

We shall not dwell on the singular objection to Mesmerism, namely, that it proceeds from the Arch-fiend, and is therefore shunned and denounced as a snare of Satan. This objection like those which refer to consequences, presupposes the truth of the facts.

Having thus briefly gone over the common objection to Mesmerism, it plainly appears that they are, for the most part, founded on ignorance of the laws of scientific evidence, and that, if the evidence produced in favour of the alleged facts of Mesmerism is to be treated as scientific testimony on questions of fact generally and very properly is, then the essential points in the statements of the chief writers on the subject must be admitted.

We have already established a parallel between Phrenology and Mesmerism in regard to their first reception; and it appears to us that this parallel may be extended somewhat further, so as to embrace the present state, and widely extended reception of both.

With regard to Phrenology, the *Edinburgh Review* no longer ventures the amazing dictum, "that there is not the smallest reason for supposing that the mind ever operates through the agency of any material organs," except those of the external senses and voluntary motion. Not only is the brain allowed to have a connection with the mind, but it is now looked on as a generally received truth, that the forehead is the seat of the intellectual powers, so that no man will view to intellectual superiority, would desire for his small and contracted forehead. It is even very generally admitted that the coronal region is connected with the high



of the special mental faculties, in which the merits of Gall, as an anatomist, are universally acknowledged as superior to those of others. But it is supposed, somehow, that he first deduced his system of faculties, and then deduced the localities from the great regions above mentioned, according to his own fancy. Nothing can be farther from the truth. Gall first noticed the organs seated in the anterior lobe; next, perhaps, those also seated there; then that of Love of Order in the occiput; and so on—for years, without leaving the three great regions, till the greater number of his faculties and their organs being fixed, he determined that the organs of the intellectual faculties were seated in the anterior lobe, those of the moral sentiments in the middle region, and those of the animal propensities in the posterior parts of the brain. Those, who admit the three great classes of faculties, without admitting the three great regions (which they almost instinctively do), are not aware that this admission implies the details to which they object, inasmuch as the classes have been established only through the localities which they suppose, assuming a class and localities, and mapping this out into organs of Belief, &c., Gall did the very reverse; for, by one, the organs of these and other senses were determined at length that they were allied in nature to the position of the organs, and thus formed the three great classes with its corresponding region of localities, then, which are denied, proved or established, a fact which is admitted.

In regard to Mesmerism, in like manner



versally admitted. Indeed it is difficult to conceive how could ever have been denied, considering the abundant testimony of all ages to its occurrence as a spontaneous condition. We are prepared to maintain that the testimony in favour of its production by artificial means, such as mesmerism, is quite equal to that which establishes the fact of spontaneous somnambulism; nay, that it is absolutely irresistible. The admission of this state as produced by Mesmerism, or even as a spontaneous phenomenon, we look upon as the turning point of the controversy, as important to Mesmerism as the admission of the three great classes of facts and the three regions of the brain is to Phrenology. Before, however, making some observations on the bearing of this point, we may remark that another mesmeric phenomenon either is now or very soon must be admitted as universal as the existence of somnambulism. We refer to the production of insensibility to pain by Mesmerism.

It is not going too far to say, that no natural fact is more satisfactorily established than this. Even the first case recorded in England of the performance of a capital surgical operation without pain on a man in the mesmeric state (the case of the man Wombell, reported by Messrs Ward and Topham), is supported by an amount of testimony, such as in any other case, would have commanded instant belief, and such as in every unprejudiced mind will produce entire conviction of the truth of the statement made by the patient and the gentlemen who mesmerised him and performed the operation. The whole account of the case bears the obvious impress of truth; and the manner in which it was received by the London Medical and Chirurgical Society is a very marked instance of the prevalence of those fallacious notions of what constitutes evidence in such cases, to which we have already referred, and will long remain a lasting stigma on the body.

But so far is that case from being a solitary one, that hundreds of similar cases have since been reported, and among these upwards of 100 painless operations performed by one gentleman, Dr Esdaile, in the presence of numerous officials of the East India Company and others, in the Company's Hospital at Hoogly. We look on the mass of evidence adduced to shew the production of insensibility to pain by Mesmerism, by Dr Esdaile in his *Mesmerism in India*, as many times more than sufficient to establish that point, had no other evidence existed; but there exists even a large amount of unimpeachable testimony to the same effect in the

mony which was absolutely, in point of cogency, the same as that which in the former case produced instant conviction. We rather think that many imagine that they can understand, account for, or explain, the action of the ether, which is a tangible material agent, whereas the action of Mesmerism, being of an intangible or spiritual nature, appears to them incapable of being explained ; therefore, the alleged result is incredible, impossible, forged ! It is hardly necessary here to add, that we can as little explain the mode of action of ether as we can that of mesmeric passes.

As little is it necessary here to point out that this discovery of the power of ether is destined to clear away an enormous mass of prejudice still existing on the subject of Mesmerism. When people are accustomed to believe (and already hardly any one doubts this), that insensibility to pain can be caused by artificial means, they will easily discover that there may be various modes of doing this ; and as soon as they try the experiment, they will find that one of these is the so-called mesmeric process. They will also find that passes are far from being the only means of producing the mesmeric state. All this will take place before long ; and people will ask themselves with wonder, how they were ever able to shut their eyes to the evidence laid before them of the power of Mesmerism in producing insensibility to pain ; and, above all, how they could so far forget the dignity of scientific investigation as to accuse medical gentlemen of the highest honour, and patients whose characters had been till then unimpeached, of conspiring to deceive the world by such stupid, unmeaning frauds ; frauds, moreover, which must infallibly have been exposed in a very short time.

Let us now consider for a little the bearing on the whole controversy of what we have just stated ; namely, that the existence of the mesmeric sleep as a result of certain processes is recognized ; and that the artificial production of insensibility to pain, in like manner, is, or presently will be, generally admitted.

The former of these is an immense step gained. It is but a few years, or rather months, since even the very existence of the mesmeric sleep was flatly denied, and those who, having seen it, professed their belief in it, were designated as either duping or duped, either rogues or fools. But now, most persons who have thought on the subject at all, are ready to admit the sleep, even while they deny most vigorously the existence of clairvoyance. In regard to the sleep, they seem to have a notion that they get rid of the matter by ascribing it to the imagination. "No doubt," they will

with the sleep more firmly established than another, it is that of the divided or double consciousness, or the circumstance that the somnambulist, when awake, does not, as a general rule, recollect what has occurred during his sleep, although he may recollect it in his next sleep. To this rule there are exceptions; and this fact is of itself a strong proof of *bona fides* in the patients. Were they impostors, they would all exhibit what is believed to be an essential mark of the true mesmeric sleep. Now if this divided consciousness exist, a lesson in fraud given in the waking state would be of no avail in the sleep. If it be said that the fraud is devised and carried out in the sleep, this admits the sleep as a fact, and we come again to the altogether inadmissible theory that all the patients and their mesmerists who have told the truth as to the first stage of mesmeric sleep, at once rush into deliberate falsehood in regard to the more advanced stages. We have seen many who admit the entire truth of the first, which they consider the least marvellous stage of the mesmeric condition, yet who absolutely reject the higher phenomena. Now it does appear to us very wonderful indeed, that such persons, professing a wise incredulity, should either admit the existence of so astounding a mass of deceit appearing in the same forms in all parts of the civilized world, on the part of persons who give a true account of the earlier phenomena; or should not perceive that this is implied in their utter rejection, as the produce of fraud, of the higher, while they admit, as facts, the lower mesmeric phenomena. Least of all, are those who adopt so amazing an hypothesis as that of the existence of fraud in all mesmeric cases, entitled to sneer at Mesmerism as a theory.

Having felt from the first, that the testimony in favour of the facts of Mesmerism was of such a nature as to entitle the subject to the most earnest and careful investigation on the part of all who feel an interest in natural truth, we have availed ourselves of such opportunities as have been presented to us of studying the phenomena. This we have done in private, because, from the very nature of the thing, it is very ill adapted for public exhibition; and we have, in several instances, seen and produced the ordinary mesmeric sleep, entire insensibility to pain, divided consciousness, and some others of the more common phenomena. It is altogether unnecessary here to specify cases or details, inasmuch as, with peculiarities in each case, the general results are precisely such as have been described with perfect truth in hundreds of published cases. Most of our observations were made on individuals who had never been exhibited, even in



a private party, and some of them had never been mesmerised before. We cannot possibly be more certain of the entire absence of wilful deceit or fraud in any persons or circumstances whatever, than in these cases; and we are bound to say, that, as far as they go, they entirely confirm the statements of all the best writers on Mesmerism.

But our opportunities have been but very limited, and we have not yet met with the higher phenomena, more especially clairvoyance. Still it would be contrary to all sound principles of reasoning were we, on that account, to deny the existence of clairvoyance, seeing that it rests on the testimony of the very same persons whose statements, in regard to the lower phenomena, we have found to be not only true, but in a high degree accurate and minute. And it would be even far worse, were we, because of our own want of success in the attempts to elicit those higher phenomena, to accuse of imposture those same observers whose testimony we have in other points found to be so trustworthy. Belief is involuntary, and no one can insist on our believing the existence of clairvoyance when we have not seen it. But not to believe or feel satisfied of the fact is a very different thing from accusing of falsehood those who say they have seen it, and whom we have no reason to doubt. On the other hand, it is not always necessary to see a fact in order to believe it. There are many facts which we believe on testimony, without having ever seen them; and it cannot surely be said that no amount of testimony would be sufficient to convince us of the existence of clairvoyance. There are many people, nay there are probably some medical men, who have never seen a case of ague, yet none of these persons doubts that an ague can be cured by means of quinine. Why is this? Simply because the testimony is sufficient. It cannot be said that the power of quinine to cure ague is more easily explained than clairvoyance; for those who have most studied the subject, best know how far we are from any thing approaching to a satisfactory theory of the action of quinine, or indeed of any other remedy. It is well remarked by a modern writer on physiology, that, in truth, the formation of a crystal is to the full as wonderful as the production of an organized being; and we may say, that our ordinary nightly sleep is not less wonderful than clairvoyance, as far as concerns our ability to explain these phenomena.

While, therefore, we have not yet been able to see any case in which the highest mesmeric phenomena have occurred, we find it utterly impossible to resist the mass of recorded testimony, both of the dead and of the living, on this point. We



doubt not that there may have been exaggeration ; that the phenomena may frequently have been ill observed ; and that many fallacious theories may have been founded on them : but making all possible allowances, there remains an amount of absolutely unimpeachable testimony, more than sufficient, if fairly weighed, to prove that, in the higher stages of the mesmeric sleep, the patient frequently acquires powers which, in his waking state, he does not possess. Whether these powers be acquired merely through an exaltation of the delicacy and acuteness of the ordinary senses ; or whether, as some suppose, a new sense or senses be developed ; or what, finally, may be the explanation or the true theory of these facts, we cannot say ; but the evidence of the facts we hold to be irresistible, and to be such as, in any question where prejudice was not excited, would never for an instant be doubted. It is not within the limits of possibility, practically, that so many observers, during the last sixty or seventy years, in so many different places, and under such various circumstances, should, in regard to clairvoyance, agree on all essential points, unless the facts were facts ; and besides, the very idea of deceit on the part of all these observers is at once felt to be preposterous.

The testimony of modern observers on this subject, is greatly strengthened by the existence of numerous recorded cases of spontaneous somnambulism, exhibiting powers far beyond the ordinary reach of the senses ; of double or alternate consciousness ; and even of insensibility to pain. And although there be little recorded exactly corresponding to mesmeric clairvoyance, yet the agreement of the descriptions of the recorded cases with those of mesmeric somnambulism in all the recorded phenomena, is such as to give us great confidence in the accuracy of the modern reports. There are, however, some facts recorded, which would seem to indicate that some of the higher mesmeric phenomena had been observed as spontaneously occurring, generally in cases of disease of the nervous system, such as hysteria and catalepsy ; and usually ascribed to supernatural influence.

This leads us to notice the very common objection urged by those who are not so ready as some are to charge others with falsehood ; namely, that the mesmeric phenomena, being observed only in "hysterical females," are, on that account, unworthy of attention.

We profess our inability to perceive the cogency of this argument. It cannot be meant that a fact is less a fact because it occurs as a symptom of hysteria. It is probably intended to maintain, that hysterical females are so fanciful,

science, in all cases, or what probably occurs of hysteria, namely, a peculiar proneness to many things that can be ascertained in dency, which is in itself a very curious worthy of careful study. Indeed, if such were capable of simulating the mass of phenomena, even in a small degree, this power would be as wonderful as clairvoyance.

But, in truth, mesmeric phenomena are in persons not at all hysterical, as in those of hysteria, and nearly as often in males as in females. There are some cases in which a tendency to this has been noted and described by the mesmerists themselves, while they all agree in thinking it a most frequent characteristic of the medium, of exalted moral sense, and the highest degree of purity.

There is another point connected with this which must here be noticed. We allude to its remedy. There can be no doubt that if once the evidence which has been published, as to the employment of Mesmerism, had been produced as a new drug, it would long since have been tried by the practitioner. Here we see the same fallacy that exists in the difference between the reception given to the insensibility to pain, as produced by Mesmerism, and by ether. Men imagine, that where a remedy is ascribed to a drug, a tangible means is employed; in fact, it is, somehow, easier to understand where there is nothing material employed. It is a greater fallacy: for, in the case of the ether,

patient's acting on himself, either by fixing the eyes on a point, or by concentrating the thoughts on the subject.

Of course the remedial efficacy of Mesmerism is likely to be exaggerated by those who have witnessed or experienced it. But the same remark applies to all new remedies, and cannot justify us in refusing to try them. An agent which has so powerful an effect on the nervous system, ought to be made the ally of the physician; and the less understood and the more dangerous the power is, the more is it the duty of the physician to study it with care. The best precaution against its abuse is the fullest possible knowledge of it. On the whole, we must confess, that medical men have been very far from attaching due weight to the evidence produced in favour of the curative powers of Mesmerism. Considering its direct and powerful influence on the nervous system, we should naturally expect to hear of its efficacy in diseases of that system; and, accordingly, we find that the alleged benefits of Mesmerism have been chiefly in cases of epilepsy, paralysis, hysteria, neuralgia, melancholia, and mania. Surely where other means have failed, as they too often do in such diseases, we are bound to try this remedy, were it merely on account of the respectable testimony by which it is recommended.

With regard to the use of Mesmerism in surgical operations, the introduction of ether, as a means of producing insensibility to pain, will very much limit its employment. There is, however, much reason to conclude, that the state induced is the same in both methods; and, if so, we must be prepared for the occurrence of very great varieties in the effects of the ether. It is highly probable that cases will present themselves which will not yield to ether; and some of these may yield to Mesmerism. Cases also may occur in which ether is injurious, and in which Mesmerism may be safely employed. It is also to be expected, that a careful study of the phenomena produced by the inhalation of ether will throw much light on the mesmeric phenomena.

Having thus gone through the circumstances connected with the reception of Mesmerism, it appears that it was at first rejected, not for want of evidence, but because men's minds were so prejudiced as not to give the evidence a fair consideration; that the evidence, being exactly such as is required in all other branches of natural science, is gradually producing a general conviction of the truth of Mesmerism; that to admit the lower phenomena, and, with regard to the higher, to assume *mala fides* on the part of all

discovery of natural science, including  
ought to be. As there is no difference between  
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produce its full effect, and that the subject will  
all its departments, precisely as any other bra  
science is.

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II. *Remarks on Monomania.* By C. LOCKHART  
M.D., Resident Physician in the Cumberland  
Lunatic Asylum at Dunstan Lodge, Gates  
(Extracted from the Northern Journal of  
June 1846.)

By the term monomania (the *partial insanity* of F  
is generally understood a state of mind impre  
particular delusion, reasoning from which, as f  
mises,\* the individual so affected converses  
himself insanely on points connected with his  
on every other subject he talks rationally, and  
managing his affairs, provided his delusion does  
them. Following out this view, authors† and  
been led to question the propriety of depriving  
rights persons labouring under some harm  
"All these doubts," as Dr Prichard truly obs  
been raised without reason or necessity. The  
a very erroneous notion as to the real nature of

I have never met with a monomaniac whose  
was centred in *one* erroneous impression. On  
I believe that a minute investigation of every



moral insanity—that while, prior to its appearance, the intellectual powers of the mind were sound, the moral and active powers were diseased—that long ere any delusion was manifest, the kind parent had become a tyrant, the loving husband alienated from his wife, the benevolent deaf to the cry of distress, the man of honour given to deceit.

The only authors who have recognised this fact, are Drs Prichard and Jacobi.\* Esquirol did not fully appreciate it, although I shall presently cite a case related by him which illustrates the real nature of monomania.

The importance of the bearing these considerations have on legal medicine is evident. If the delusion constituted the whole disease, it would in many instances be both unjust and unnecessary to deprive a man of his liberty, and of the command of his property. But if the delusion be, as I have stated, merely a symptom of a perverted state of the moral and active powers of the mind, the individual, whatever may be his delusion, is always unfit for society, and often most dangerous.

The origin and progress of monomania is well illustrated by the following case at present under my charge:—

Mr ———, æt. 41, was admitted into the Dunstan Lodge Asylum in December 1845.

Ten years since, he met with a disappointment with regard to a testamentary document. From that period symptoms of moral insanity have manifested themselves. He has been wayward and capricious in his conduct, reckless in his expenditure, and frequently unkind to a most affectionate wife. He has also squandered large sums of money in purchasing property, and selling it at a loss, &c. &c.

In December 1844 there supervened on this morbid state of the moral and active powers, a delusion that his life had been attempted by poison, and that his servant had been bribed to administer it to him in his food. He kept fire-arms about his person, and threatened the life of any one who should attempt to enter his house, stating that an Englishman's house was his castle.

This same delusion still persists; he will listen to no arguments against it. He threatens with the extreme penalty of the law, those who have placed him in confinement. On all other subjects he converses rationally, and is a very agreeable companion.

Similar is the course of monomania in the case of Mr ———,†

\* [The tendency of morbid emotions to give rise to corresponding partial intellectual *delusions* has been remarked in this Journal, vol. xvi. p. 187-8.—Ed. P. J.]

† Esquirol, *Des Maladies Mentales*, &c., tom. ii. p. 12. Paris, 1838.

newspaper paragraph regarding the pretence imagined himself the son of Louis XVI., which left him.

Such also were the symptoms exhibited by a gentleman of great intellectual capacity, and of reasoning, who, from a fear that his wife exerted an undue influence over his judgment, became morally insane—then monomaniacal, with great mind, and at last he destroyed himself.

The progress of monomania in the case of a similar. For several years he laboured under moral insanity, was dejected in spirits, morose, dissatisfied with himself, and suspicious of all that he heard. He then became a monomaniac, believing he heard whispers in distant apartments of the presence of malevolence and abhorrence.

Similar was the progress of the disease in the case of —, æt. 41, who was admitted in October 1845. Years prior, she had, from too great anxiety become low spirited, unsettled, and unable to attend to her affairs. Her moral feelings became gradually perverted; she took a groundless dislike to many of her relatives; was capricious, wayward, and ungovernable; her language became abusive in the extreme.

There was no lesion of the intellectual powers; her health was good, the catamenia regular. She remained in this state without any improvement until about 1844, when the delusion that her bed, body clothing, and furniture were damp, manifested itself. She sits constantly by the fire, but never is she dry. At night she takes great pains to keep out the damp, the curtains are closed, and she is surrounded by the counterpane. Her mind

dans l'enfance sociale, tandis que dans les sociétés avancées, elle a pour cause et pour caractère, l'orgueil, l'abnégation de toute croyance, l'ambition, le jeu, le désespoir, le suicide. Il n'est pas d'époque sociale qui n'ait été remarquable par quelques monomanies empreintes du caractère intellectuel et moral de chaque époque."

A striking set of cases of monomania are those supervening on that variety of moral insanity commonly termed melancholia, and in which the imaginings are of the same sombre tint. Such patients, after being for some time in a low desponding state, imagine that they are doomed to death, nay, that against them even the gates of eternal mercy are closed, and that everlasting punishment must be their lot, &c. &c. I have several such cases at present under my charge. One can almost recognise them at first sight, by the thin, pale, yellow face, and the fixed, immovable expression of woe. I have one patient who is constantly tearing his flesh, crying "Lord, have mercy upon me." They are utterly beyond possibility of conviction. "N'ayant" la raison lésée que sur un point, il semble qu'ils mettent en action toute leur puissance intellectuelle pour se fortifier dans leur délire . . . rarement parvient on à les convaincre, jamais on ne les persuade."

Hallucinations and illusions are another remarkable variety of monomania. Patients in a state of *hallucination* believe, from the evidence of their diseased senses, in the presence of persons and things, which for them at least can have no existence. Thus Margaret —, a patient in this asylum, sees and converses with her former friends, who she states are standing beside her. She has often long disputes with them, and nothing can convince her of their non-presence. Before the supervention of these hallucinations, she was morally insane. Some hear music†—others threatening voices, while all around is still. Some see the heavens opened; others behold flames and serpents ready to devour them, &c. &c.

*Illusions*, on the contrary, depend on the false perception of some really existing bodily condition. Thus the illusion that a worm‡ is gnawing at the brain may depend on headache—that the brain is liquefied, on the throbbing of the arteries—that an animal is in the stomach, on the presence of any form of dyspepsia. Although both illusions and hallucinations do, by being engrafted on a state of moral insanity, constitute monomania, they may also present themselves as symptoms

\* Esquirol, p. 149.

† Ibid.

‡ Ibid.

have always reference to himself. They relate to his fortune, rank, personal identity; at others to the state of his body and his sensations. In the former class of patients, feeling himself unhappy, fancies himself ruined, betrayed; or, being disposed to an opposite, feelings, possessed of great wealth and affluence, to all mankind. The difference of these impressions to depend upon the different state of spirits. Those affected by the former kind of impressions or morbid minds are predisposed to gloom and foreboding; the latter kind affect the sanguine and excitable. I have seen a French lunatic who exclaimed with great air of dignity, 'Je suis le Pape, le saint-père de Rome.' A monomaniac who fancied himself possessed of great power once asked me if he should give me a sum of money, I said no, he once down and wrote a cheque, 'Pay Dr Prichard's bill in charge on God's bankers.' Another, a pauper, told me, while thanking me for some medicine, that he would pay my bill in at Christmas, he would with great pleasure.

The *prognosis* in moral insanity is generally more so it must be when on that state of mind a morbid impression has been engrafted! The *treatment* of moral insanity demands, more than any other form of insanity, a knowledge of the character of the patient; whether he be kind or severe, sympathetic or ridiculous, the greatest influence on his mind. This is the principle of treatment. The carrying out of it will vary in different cases—in but few will our endeavours be successful.

DUNSTON LODGE, March 1846.



tations in fresco of Theology, Poetry, Philosophy, and Jurisprudence. The picture in illustration of Philosophy is commonly called "The School of Athens."\* The cartoon from which it was painted with some variations, is in the Ambrosian Library at Milan. It is about 30 feet long, is drawn with black chalk on grey paper, and is in perfect preservation. "It represents," says Mrs Jameson, "a grand hall or portico, in which a flight of steps separates the foreground from the background. Conspicuous, and above the rest, are the elder intellectual philosophers, Plato, Aristotle, Socrates: Plato characteristically pointing towards heaven; Aristotle pointing to the earth; Socrates impressively discoursing to the listeners near him," &c. The following remarks occurred to me after studying both the cartoon and the finished fresco.

"The School of Philosophy" possesses the great characteristics of Raphael's genius. It represents a scene replete with life, action, and interest; yet quiet, calm, graceful, and dignified. The composition is excellent, and no trace of study in the placing and grouping of the figures is discernible. They all seem to have taken the places, and fallen into the attitudes, naturally springing out of their occupations. Each is engaged in his own department,—some teaching, some listening, and some studying. Each is unconscious of everything foreign to his own occupation. The figures represent philosophers and students of the highest order. There is no pedantry, no excited intensity, nothing to proclaim consciousness on their part that they are distinguished men, or that they are doing any thing for which they expect to be admired. We look on the scene of their daily life, yet we discover their greatness. Some uncertainty, however, prevails concerning *what* Raphael meant to represent in this picture. Shortly after his death it was said to contain a religious subject; but opinion has now pretty generally settled into the belief that it is the "School of Athens," a conclusion which appears to me to be strongly supported by the details of the work itself. Kugler† says, "The general arrangement of this picture is most masterly. . . . The style is grand and free; a picturesque unity of effect seems to have been the artist's aim throughout; and this aim he has attained most perfectly." I cordially subscribe to the soundness of this criticism, and add that the effect of the composition is increased by the entire absence of every thing like study in

\* Il Vaticano descritto ed illustrato, vol. vii., tav. 31.

† Handbook of the History of Painting, Book v., chap. iv.

obviously for the sake of balancing the two  
ture. In "The School of Athens" all is na-  
ful, and the superiority of the effect strikes  
observer.

Kugler proceeds:—"The taste of design  
of Athens" both in the nude and in drapery  
is everywhere guided by the purest senti-  
There are, however, some important excep-  
rectness of this remark. In general where  
high, Raphael gives a high moral and inte-  
ment to the head, and adds to it a correspond-  
ful, refined, and intellectual. I trace the in-  
feel in such figures to the circumstance that  
is brought out by means of appropriate for-  
tions in the head, the trunk, and the limbs.  
fineness of texture in the animated surface  
pression, attitude, and occupation, corres-  
intellectual qualities and moral emotions.  
duates these qualities in different figures.  
skill: while lowering them to represent infir-  
he preserves harmony in all the parts, and  
abrupt transitions until he reaches the bottom  
where we find the low mind accompanied by  
harsh forms and inelegant proportions, coar-  
ungraceful attitudes! For example: In this  
to the right of the centre (the left of the spe-  
sents Socrates clothed in green drapery. Taken  
from the ancient busts of this philosopher,  
exactly with his historical character. It is the  
lobe of the brain is large, and the coronal  
particularly in the situations of the organs  
and Veneration. But the position behind the  
position of the ear itself in relation to the

these features, and the rest of the countenance, are softened, elevated, and lighted up by a fine moral and intellectual expression, corresponding to the high development of the moral and intellectual regions, and the active manifestation of these in which he is engaged. His figure and attitude proclaim the ascendancy of the higher powers. They are graceful, earnest, and full of mind; but in his countenance the existence and vigour of the lower propensities, as part of his nature, are distinctly recognisable. He is using his fingers in elucidating a proposition to his scholars, who, also earnest, graceful, and intellectual, are grouped around him.

In the foreground, almost in the centre of the picture, there is a figure reclining on a stone pedestal or table; his left hand is pressed on his cheek, his elbow rests on the table, and he is writing with his right hand. It is not mentioned whom this figure is intended to represent; but the manner in which he is treated is altogether worthy of Raphael. Although in Athens, this man is not a Greek. He has a Roman head; that is to say, the base of the brain is very broad, the region of the perceptive organs is largely developed, but that of the coronal region is only moderately high. The temperament is purely bilious. This portrays a powerful physical man, with an acute observing intellect, but without high moral and reflecting attributes; and, in conformity with this character, Raphael has bestowed on him strong black hair, hardness and harshness of features, a thick form of person, with strong and rather coarse limbs, indicated in the naked knees and hands; while his attitude is constrained, and the forms of his drapery are heavy and inelegant.

Nothing can be more perfectly harmonious and true to nature than these two figures in all their parts.

Contrasting with them both, is the figure of Diogenes reclining in the centre of the foreground between the groups, and apart from all. He appears with a Greek head, which exhibits a comparatively narrow base of the brain, a well developed coronal region, and a large anterior lobe. This combination indicates a high moral and intellectual character, and Raphael has accordingly bestowed on him a graceful, well-proportioned person, of fine texture, and a graceful easy attitude. Yet there is an error in the face. The artist has given him the ill-natured cynical expression which corresponds with his historical character; but this is at variance with the soft, amiable, good, and graceful head and figure with which it is associated, and to which it does not belong. The head should have represented Self-Esteem, Destructiveness, and Secretiveness *plus*, and Benevolence, Veneration,

mark, that in assigning particular names and the figures we may be doing injustice to their for there is no authentic evidence that he meant to present the personages now mentioned. It is when he deviates from the consistency of natural example, he bestows on the supposed Diogenes a head which indicates kind, social, and benevolent, and combines with it a cynical expression of countenance that he is open to just censure. Farther, these figures are placed considerably above the spectator, and the expressions and apparent forms of the figures in the pictures to vary according to my position; whence, even if I may unconsciously have been engendered such mistakes, I visited the pictures again and compared my remarks with the best prints; but I cannot judge modestly, for prints are not always accurate owing to occasional carelessness in copying and engraving. For example, during my visits, an artist had copied and finished the chalk drawing of a copy of this head. I observed that instead of copying the head of Diogenes as it is drawn by Raphael, and before describing the position of the ear, enlarged the posterior part of the head, and, instead of rounding it, carried it perpendicular up, thereby enlarging certain animal organs, diminishing the organs of Concentrativeness, and enlarging the organs of Esteem and Firmness. He also added a portion of Veneration, while he diminished the intellectual power by shortening the anterior lobe. In the head of Socrates, the head leans gently and earnestly forward to teach—the natural attitude which would be



copy, would have carried his head high, and looked magisterially and sternly.

Raphael's own head, as we have seen (vol. xix. p. 47.), was of moderate size, and his natural superiority apparently sprang from a high quality of brain, and an admirable combination of organs. The display of gigantic power and stormy passion, therefore, were not within the sphere of his natural endowments; which was that of grace, beauty, purity, and calm moral and intellectual dignity. It is mentioned, however, that after he became acquainted with Michael Angelo, whose head and temperament were very different from his, and whose manner of feeling and painting was bold and energetic, he adopted a freer and bolder style, approaching in some degree to that of his distinguished rival. Critics are divided in opinion whether Raphael really improved the merits of his works by this imitation of Michael Angelo's manner. As might naturally be expected, the preference is given to his original style by those in whom the brain is developed similarly to Raphael's own; while his adopted style is preferred by those whose brains more closely resemble that of Michael Angelo. Those critics especially, in whom the organs of Form and Size are but moderately developed, are distracted by the great size of the figures in the new style, while those in whom these organs are very large, feel his original style to be contracted, timid, and feeble. Bold forms and large masses alone fill up and gratify their capacious powers.

"The Fire in the Borgo,"\* is one of the most successful examples of his new manner. The Borgo is that part of Rome which lies close by the Vatican. It is represented as on fire, and in the midst of the conflagration the Pope appears at a window of that palace, and stays the progress of the flames by miraculous power.

The first circumstance which strikes an observer, is the calm atmosphere in which the Pope stands: although high on a balcony, not a fold of his robes is moved; while in the foreground, in the close neighbourhood of the fire, the draperies of the women who are flying from it, or carrying water to extinguish it, are agitated by a powerful wind—so violent, indeed, that Kugler speaks of "their drapery being tossed in grand folds by the storm." This is a mistake—there is no storm; but Raphael, with that extraordinary correctness of observation which he so generally displayed in his works, represents, with philosophic exactness, the

\* Il Vaticano descritto, vol. vii., tav. 23.

...is a manifest endeavour to display a know-  
perhaps from a wish to rival the powerful figure  
Angelo." The figures of the young women and  
children (escaping from the flames) here allude  
certain grandeur of outline when considered in  
effect ; which was probably all that the artist aimed  
pishing. But when we examine them in detail  
to me to be unsatisfactory. The arms and legs  
are large and coarse, even to clumsiness ; and  
expressions of their faces are of a low type. The  
children are lumps of fat flesh. Forms certainly  
expressed ; but viewing them as connected with  
and expression, they are mean forms. Is it a rule  
size alone is capable of conferring grandeur, and  
may be pleasing in their outlines, although the  
expression be coarse and low ? Homer gave a  
size to his gods ; but he did not fill up his outlines  
complete them so far as to present us with the  
of their parts. The Artist is more circumspect  
figures must possess definite proportions, and  
well as magnitude ; and although grandeur may  
not in the size, yet unless the proportions  
harmonize, the result may be unpleasing.

I grant that in this picture Raphael represents  
fire, and individuals of the humblest class escaping  
labouring to extinguish the flames ; and that a  
controversy may be maintained whether in a picture  
should possess grace and beauty, or only truth  
which would most probably be found in their  
nature. Assuming that Raphael is right in his

was compatible with the subject of this picture. Nature's nobility are sometimes found in the humblest rank ; and the painter is authorised to select them for his designs. At all events, he should render their different qualities consistent.

It appears to me that in this work Raphael has stretched his forms beyond the limits within which his genius could successfully deal with them. In enlarging the size with a view to attaining grandeur of effect, he has lost in some degree his command over proportion, texture, and expression ; just as a fencer, who could wield a small sword with grace and dexterity, might strain, falter, and make awkward passes with a heavy claymore. All Raphael's pictures in which he has attempted this grand style and form, are inferior in their other qualities to those in which he has followed his natural manner. In this opinion I am supported by the authority of Kugler himself, who says, that, " like all other artists, Raphael is always greatest when, undisturbed by foreign influence, he followed the free original impulse of his own mind. His peculiar element was grace and beauty of form, in as far as these are the expression of high moral purity. Hence, notwithstanding the grand works in which he was employed by the Popes, his peculiar powers are most fully developed in the Madonnas and Holy Families, of which he has left so great a number." This criticism is sound ; and the truth which it embodies is a direct consequence of the cerebral development and physiological constitution which Raphael possessed.

As the object of the present communication is to discuss the principles of art in connection with Raphael's brain and genius, rather than to criticise his works in detail, I shall now consider the Cartoons—those great designs which are accessible to the British public, and which are justly regarded as among the most successful productions of his pencil. These are pictures on a large scale, which were prepared for and worked by a Flemish weaver into tapestries, to adorn the Sistine Chapel in Rome. The originals having been left in neglect in the warehouse of the weaver at Arras, were afterwards, on the suggestion of Rubens, purchased by Charles I. of England. They were originally eleven in number, but four of them are lost, and the remaining seven are now in the Gallery at Hampton Court. The intention of the artist was to represent certain striking incidents in the history of the Church. Hazlitt gives the following description of them, which is correct, in so far as regards their general qualities :—

Compared with these (says he), all other pictures look like oil and varnish ;

fill, raise, and satisfy the mind, they seem to have done nothing. Everywhere else we see the means; here, apparently without any means. There is a spirit of creation before us; we are unconscious of any progress made; we are aware only of comprehensible masses of figures; the sense of power supersedes the sense of means. It is as if we had ourselves seen these persons and the state of our being, and that the drawing certain lines by some unknown spell brought back the entire and made them pass before us, palpable to thought, feeling. Not all this is owing to genius; something of this effect is due to the simplicity of the vehicle employed in embodying the idea, something to the decaying and dilapidated state of the original. They are the more majestic for being in ruins. We are struck with the truth of proportion, and the range of conception. The corruptible has put on incorruption; and the fading of colour and the mouldering of material beauty, not the universe of thought, or the broad imminent shadows of creation and majestic pains.

This encomium relates only to the *general* merits of the cartoons; a few words may be expended in analysing the separate merits of each, and we may consider the order in which they are arranged in the Gallery.

#### 1.—THE DEATH OF ANANIAS.

This picture receives the highest praise from the artists; but it is placed in such an unfavourable position in the Gallery, under the shade of a wall, that several visits to the collection in April 1846 were necessary to be fortunate as to meet with light enough to see it. For this reason, it is not so well known as it deserves.



blind, not seeing the sun for a season. And immediately there fell on him a mist and a darkness; and he went about seeking some to lead him by the hand."—*Acts* xiii. 11.

Mrs Jameson gives the following description of this Cartoon :—

The Proconsul Sergius, seated on his throne, beholds, with astonishment, Elymas struck blind by the word of the Apostle Paul, who stands on the left: an attendant is gazing with wonder in his face, while eight persons behind are all occupied with the miraculous event which is passing before their eyes; two lictors are on the left; in all fourteen figures. Size 14 feet 7 inches by 11 feet 4 inches.

This cartoon, as a composition, is particularly remarkable for the concentration of the effect and interest in the one action. The figure of St Paul is magnificent; while the crouching abject form of Elymas, groping his way, and blind even to his finger-ends, stands in the midst, and on him all eyes are bent. The manner in which the impression is graduated from terror down to indifferent curiosity, while one person explains the event to another by means of gesture, are among the most spirited dramatic effects Raphael ever produced.

This criticism conveys a just idea of the general effect of the picture; but we may inquire into the means by which it is produced. Assuming the artistic qualities of drawing, colouring, and composition, to be present in a high degree, the questions remain, What kind of human beings has the painter introduced? What parts has he assigned to each, and in what manner has he adapted their mental and physical attributes to the qualities and offices which he confers on them? The scene is in Greece, and an important personage in the drama is Sergius Paulus, the Roman proconsul, seated on his throne. An ordinary artist might have introduced the figure of any well-made man, and considered him a fit representative of a Roman governor; but not so Raphael. He has placed on the throne a being the very fac-simile of the old Roman statues in Rome, and of the Trastevere men of modern days, who obviously are the descendants of the ancient Romans, and who retain their organization unchanged. The figure is self-consistent and Roman throughout. The head is large; it is broad at the base; there is a large anterior lobe, a rather low coronal region, a bilious-nervous-lymphatic temperament, and a large broad chest; and in exact correspondence with this combination the figure is well formed, but thick and muscular. It is characterised by strength, much more than by grace or elegance; but there is so much of the express stamp of intellect upon it, that it is neither coarse nor vulgar. The other figures are individuals, and their self-consistency is admirable.

vey. These are the permanent elements of his character, expressed through his organization. His transition from vision is scarcely so well adapted to his circumstances as he suddenly struck blind, and his whole being, from that moment, manifests the puzzle of the intellect which the artist has put before him, but there is in the face and attitude no terror or anger. There is simply the puzzle, the shrinking, the groping of unexpected blindness. There is neither intense insensibility, or extreme Sensibility, nor Firmness in the character, to render such an expression a puzzle without surprise or terror) natural and true in all its instances. Whatever induced Raphael to bestow this character, he has at least the merit of rendering the figure self-consistent. It is reported, that Giotto objected to the truth of the Sorcerer's action. West, who was present, requested him to shut his eyes, and walk across the room; in doing which, he shrank back, stretched out his hands, and bowed forward in his way, with the exact attitude and expression which was represented. May we not infer that Raphael, by an eye for an eye, and judgment, selected the kind of man that the Sorcerer to be, blind-folded him, made him a copy of himself, actually copied his appearance? If so, the painter's model represented only a man whose eyes were closed by his own consent, and by perfectly natural means, and who, folded for the moment, and whose attitude and expression, therefore, represented merely the blindness of the moment, his situation, but nothing of astonishment or terror. The simple reason, that, in his case, there was not any other emotion. An analytic knowledge of the human mind, and of the human body, is the only way to the truth of the human figure.

base, and a full anterior lobe, developed chiefly in the lower and middle lines; deficient in Ideality and also in Wonder. The whole body and expression correspond. It is a business-like practical head, and the expression is one simply of a business-like interest in the event, with such a degree of surprise only as a business-like practical mind would experience. The temperament is bilious-nervous, and the texture of the skin and forms of the features indicate strength predominant over refinement. The character of firmness and strength pervades the whole figure, and the attitude and drapery display Raphael's usual sound judgment and correct taste.

The figure on the spectator's extreme right (the extreme left of the picture) is another complete and harmonious individual. The temperament is nervous-sanguine-bilious, the base of the brain is moderate, and the moral and intellectual regions are those of a common average man. The expression is lively, correspondingly with the temperament; it is free from all taint of low propensity, correspondingly with a moderate base of the brain, yet it is not *spiritual* or poetically beautiful, thus harmonising with a moderate Ideality; it is acute, but not profound, in accordance with a fully developed but not great anterior lobe; and although vivacious it is not frivolous, in accordance with a full size of brain and corresponding solidity of character. The figure is tall, animated, active, and handsome, and although it does not attract attention by its beauty, yet it is pleasing in its effects.

Next to, and backwards from, this figure, is seen an old man with a bald head and white beard. Compared with the last mentioned figure, the temperament is more purely nervous, and the intellectual organs are larger. Raphael has also given a large organ of Ideality to this head, and he has infused the refined quality which this combination produces, into the texture of the skin and expression of the countenance. The features are more finely cut, and there is that blending of fine texture, fine form, and fine colouring, which accompanies a great endowment of Intellect and Ideality.

Here we see that Raphael, with skill in composition and beauty of form and colouring, combines truth in the individual characters of the beings whom he represents. He gives to each a certain temperament, and a certain size and form of head—in other words, the external signs of certain talents and dispositions—and then he works out all the subordinate details in harmony with the mental basis. Even the folds of the drapery are imbued with and speak forth the qualities indicated by the form of the head, and temperament. His figures, therefore, interest us as real beings with the same

Grace in form and movement is the natural high mental and physical qualities, and harmony is its most important element. In painting, attitude is the only representation which of motion. It is motion arrested at the moment the artist for his event, and it is determined by impulses which at that instant animated the being. Generally speaking, Raphael's attitudes are in harmony with the mental expression, and both are admirably indicated by the physical qualities indicated by the brain; but, as mentioned, there are exceptions. Guided, as he has been, chiefly by a sort of inspiration or intuition from his own fine quality of brain, and finely coordinated organs, he generally reached the standard of nature, but not always. In this picture of Elycer, for example, Paul's head and expression indicate a hard, sharp, irritable mind, excited by anger. This type historically belonged to Paul; but, unfortunately, in this case not to have combined the expression of moral grandeur and dignity. I shall have to revert to this subject when treating of Paul in Athens.

### 3. THE HEALING OF THE LAME MAN AT THE BEAUTIFUL TEMPLE.\*

"Then Peter said, Silver and gold have I none; but as I give unto thee. And he took him by the right hand, and raised him up."—*Acts* iii. 6, 7. Under the portico of the Temple stand the two Apostles Peter and John; the former is holding in his hand a miserable deformed cripple, who gazes up in his face



Mrs Jameson's artistical criticisms on this cartoon in the *Memoirs* from which I have quoted this description, are spirited and acute, and appear to me to be sound. As her work is in every body's hands, I shall not quote her remarks, but only add that in this picture St John is far inferior to the St John of Leonardo da Vinci in "The Last Supper." In the latter, this apostle has a large intellectual with a very high moral development, particularly in Benevolence and Veneration; and his expression and attitude are the sweetest, the meekest, the most engaging and graceful, that can be conceived—altogether worthy of the disciple whom Jesus loved. Raphael's St John has an anterior lobe of moderate size, the lower region predominating, while the moral region also is only moderately developed. He appears with a broadish face, a sanguine and lymphatic temperament, and a pensive but not a high expression of countenance; altogether, an amiable but common-place man. The cripples, on the other hand, are represented with extraordinary skill. Their heads as well as their bodies are ill-formed, yet so managed as not to be repulsive. Their anterior lobes are pretty well developed, the base and back portions of the brain are large, and the coronal regions are deficient. The character indicated by this development is one of passion and animal energy, accompanied by some degree of intellect. It tells of sin as well as of suffering. Here, ill-proportioned and ill-shaped bodies correspond with ill-shaped brains; yet the traces of intellect and of animal energy, diminished, but not extinct, ward off all sentiment of meanness. Moreover, as much of grace in the attitudes and outlines as is compatible with the characters, is added to complete the effect.

#### 4. THE MIRACULOUS DRAUGHT OF FISHES.\*

"When Simon Peter saw it, he fell down at Jesus' knees, saying, Depart from me, for I am a sinful man, O Lord."—*Luke* v. 8. On the left Christ is seated in a bark, in the act of speaking to St Peter, who has fallen on his knees before him; behind him is a youth, and a second bark is on the right. Two men are busied drawing up the nets miraculously laden, while a third steers. On the shore, in the foreground, stand three cranes; and in the distance are seen the people to whom Christ had been preaching out of the ship or boat.

Mrs Jameson adds: "In this cartoon the composition is very beautiful; and the execution, from its mingled delicacy.

\* *Lib. cit.*, vol. vii., tav. 11. This plate also is reversed, and in some particulars altered. The form of the head of Christ is rather improved upon that of the cartoon, but the expression is unworthy of the character.

figure is one, free, natural, and happily treated. Whatever might have been its simple attitude, it is here turned partially to the effect of which position is, that it appears to rise the region of Self-Esteem and Love of Approbation is so far forward that a short, poor look is given to the anterior lobe; and the coronal region, as presented to the spectator, is only full. The diminished appearance of the anterior lobe arises from the face being partially turned to the spectator. This attitude is attended with the disadvantage: while it takes off from the apparent size of the anterior, it enlarges that of the posterior portion of the face, a sure method of detracting from the indication of character. Another consequence is, that the face appears small, and the lower part of the face recedes so as to have an air of feebleness. The temperament is lymphatic, and the character expressed by the figure, is that of a soft, sanguine, amiable, small hand also appears small.

The other figures, particularly the two in the foreground, are full of life and truth. They have practical wisdom in which the knowing intellectual organs predominate. They have an average coronal region, and bilious temperament. They are not men of a high order; but they are first-rate of their class. The incident in the text before us is presented in the most admirable manner. Simon, a plain Jewish fisherman, is here penetrated to the soul, by a profound sense of the greatness of Christ, and of his own unworthiness; but in his expression there is no weak surprise, no crouching or recoiling, as if he were himself a base being: the effect produced is a rational apprehension of his Master's holiness.

"strange black birds," be they herons or cranes, partake of the excitement of the men, and add greatly to the spirit of the picture.

5. PAUL AND BARNABAS AT LYSTRA.\*

"Then the priest of Jupiter which was before their city brought oxen and garlands unto the gates, and would have done sacrifice with the people; which when the apostles Barnabas and Paul heard of, they rent their clothes."—*Acts* xiv. 13, 14. On the left Paul and Barnabas are standing beneath a portico, and appear to recoil from the intention of the townsmen to offer sacrifice to them; the first is rending his garment and rebuking a man who is bringing a ram to be offered. On the right, near the centre, is seen a group of the people bringing forward two oxen; a man is raising an axe to strike one of them down; his arm is held back by a youth who, having observed the abhorrent gesture of Paul, judges that the sacrifice will be offensive to him. In the foreground appears the cripple, no longer so, who is clasping his hands with an expression of gratitude; his crutches lie useless at his feet: an old man, raising part of his dress, gazes with a look of astonishment on the restored limbs. In the background, the forum of Lystra, with several temples. Towards the centre is seen a statue of Mercury, in allusion to the words in the text: "And they called Paul, Mercurius, because he was the chief speaker."

The composition of this cartoon is highly praised by artists, but as a picture it is not so interesting to me as those before mentioned. Paul is tearing open his vestments to shew them that he is a man, and his face is looking down, and much in the shade. The forms and expression are hard, harsh, and unpleasing. Barnabas stands behind him, and in the cartoon his head is indistinctly seen; but in the plate mentioned in the foot-note, he is represented with a deficient anterior lobe, the reflecting region almost wanting, a small coronal region, and a large base of the brain, all enveloped in a thick massy covering of hair. The forms and expression of the face correspond with this combination. He is a silly, angry, excited, gaping, staring man. Paul beside him looks, in the plate, like a Jupiter Tonans, he is so powerful, and so full of scorn. The most interesting objects are two beautiful, intelligent, natural-looking boys standing at the altar, and a vigorous, athletic man, who, with an uplifted axe, is about to kill an ox in sacrifice. This man's head is, in point of form, a common one, but it is large; the temperament is bilious, the thorax ample, and the figure is strong, hard, and muscular; every line of it being in harmony with all the rest. The ox is well painted; and, on narrowly examining the heads to the right of the spectator (left of the cartoon), some of them

\* *Lib. cit.*, vol. vii., tav. 8. This plate also is reversed.

Athens, I perceive that in all things ye are  
passed by and beheld your devotions, I found  
tion, To the unknown God."—*Acts xvii. 22.*

Mrs Jameson gives the following of  
this picture: "Paul, standing on so  
preaching to the Athenians in the Ar  
are three philosophers of the different  
Epicurean, and the Platonic; beyond  
disputing among each other. On the r  
figures of Dionysius the Areopagite a  
Damaris, of whom it is expressly said th  
clave unto him.' On the same side, i  
seen the statue of Mars, in front of a  
point of pictorial composition this carto  
in the series. St Paul, elevated above  
dignified in bearing, as one divinely ins  
and position, 'stands like a tower.' Th  
has been imitated from the fresco of Ma  
at Florence. There Paul is represente  
in prison. One arm only is raised, th  
upward; he is speaking words of conso  
the grated bars of his dungeon, behin  
form of St Peter. Raphael has taken  
raised the two arms, and given the wh  
energy wanting in the original. The p  
him are not to be considered a mere pro  
of individuals; among them several fig  
to personify a class, and the different s  
sophy may be easily distinguished. He  
ing deeply, and fabricating objections; th  
on his staff, giving a steady but scornfu  
in chafing.



elicit truth or acknowledge conviction. At a considerable distance in the background are seen two doctors of the Jewish law. The varied groups, the fine thinking heads among the auditors, the expression of curiosity, reflection, doubt, conviction, faith, as revealed in the different countenances and attitudes, are all as fine as possible; particularly the man who has wrapped his robe around him, and appears buried in thought. This figure also is borrowed from Masaccio. The closed eyes, which in Masaccio might be easily mistaken for sleeping, are not in the least ambiguous in the cartoon; his eyes indeed are closed, but they are closed with such vehemence that the agitation of a mind perplexed in the extreme is seen at the first glance. But what is most extraordinary, and I think particularly to be admired, is that the same idea is continued through the whole figure, even to the drapery, which is so closely muffled about him that even his hands are not seen; by this happy correspondence between the expression of the countenance and the disposition of the parts, the figure appears to think from head to foot."

I have cited this criticism at full length, because, although it coincides with the opinions generally expressed by connoisseurs and artists, I am reluctantly led to dissent from it in relation to the most important figure in the picture, namely, that of St Paul himself. This figure appears to me to be the least successful representation of a great moral character which Raphael has left behind him. I was struck with its deficiencies in the tapestry woven from the cartoon when I saw it in the Vatican; then the idea occurred to me that the weaver must have altered the head; but on studying the original cartoon in Hampton Court, I find that it bears exactly the same character. The anterior lobe is of only moderate size, the coronal region is deficient, and the base and hind portions of the head are very large; all indicating a low, irritable, contentious disposition, unredeemed by great moral and intellectual powers. St Paul, highly excited, is uttering the words, "Ye men of Athens, I perceive that in all things ye are too superstitious;" but the excitement, although true to the character of the head, is altogether inconsistent with that of a great and good man. In the forms and expression of the face, there is no intellectual depth, no moral grandeur, even no religious inspiration. On the contrary, there is a sharp, querulous, and almost mean expression, bespeaking a small brain and feeble mind, roused by anger.

St Paul's combination of faculties probably presented a dif-

guage, he must have had a large brain, with of Combativeness, Destructiveness, Self-Esteem, giving rise to vehemence, severity, and also large organs of Conscientiousness. Wonder, producing moral sincerity and religious zeal all which must have been added a large ante-reflecting region predominating; for he manifested of character in his actions, and powerful metargumentative talents in his writings. Raphael had too decided a predominance of the moral and organs in his own brain to be able to realize the innerness or inward state of being of such a man so vividly as to be able to represent him successfully of excitement. Singularly enough, and in conformity to tradition, he did not himself invent this figure according to tradition, borrowed it from Masaccio, must have laboured under great difficulties before he could borrow an entire figure from any artist, and he must have been deserted by his intuitive genius when he adopted the St Paul of Masaccio. The portraits never represent him as having had very large knowledge, especially those related to art, but to have been more naturally gifted with those of reflection; and he was before, but ill qualified to penetrate into the character of St Paul, and to realize him on canvas.

The original of Raphael's figure has been ascribed to Filippo Lippi, a monk "whose life has been most scandalous, even without consideration of his religious habits." If so, he too was a polluted vessel, which to derive the image of a great teacher of the world. I have not seen Lippi's figure, but Raphael's is very close to that of Masaccio that I am disposed

selves in such an expression of countenance and body, could not have roused, or detained for five minutes, the attention of the superior order of men who constitute his audience. Combativeness and Destructiveness give great fire and power to the mental manifestations, when combined with high moral and intellectual qualities; and this combination, we have reason to believe, characterised St Paul in an eminent degree. We have here, however, only the querulousness and excitement of the lower feelings, without the weight, dignity, refinement, and mellow blending softness of the higher powers. By nature, St Paul belonged to that class of men of which Luther and John Knox are eminent specimens; and we know by their portraits that they possessed the combination of the higher with the inferior organs which I have here ascribed to St Paul. Raphael himself must be placed in the class of which Melancthon is a fit representative; and hence, as I have said, probably arose his difficulty in drawing St Paul from his own inspiration.

The drapery, attitude, and figure of St Paul, merit the artistical encomiums bestowed on them; but they are not in harmony with the mind of which they are the expression. To have been correct, they should have been less dignified and graceful. They are far superior to the head and expression; but this remark is more applicable to Raphael's figure than to that of Masaccio. In the latter, the head of St Paul presents large size, large organs of the propensities, great Firmness, and powerful intellectual organs; while the attitude, drapery, and expression, are characterised by a vigorous strength, more than by grace and refinement. Raphael has lowered the character of the head and facial expression, while he has added to the grace and dignity of the attitude and drapery. Sir Joshua Reynolds, in the passage before quoted, recognises the fact that, in a perfect picture, the drapery even bespeaks the mind which animates its folds. That this is the case in nature may be discovered by any good observer, who studies the dress of an elegant, sensitive, and accomplished woman when in high health and spirits, and observes it again when she has the misfortune to suffer under an attack of hypochondriasis, or other disease accompanied by nervous depression. The apparel may be the same, but she no longer communicates to it the spirit, grace, and air, which formerly pervaded it in every fold. A poor, cold, lifeless tawdriness has taken the place of the elegance and elasticity of health. According to this principle, the mind represented in the head and face of St Paul never could have produced the air, attitude, and grace of the person and drapery bestowed on him.

philosophers, men of mind and learning, associated with science and letters. In both pictures the same principles are shown. On analyzing and contrasting the groups it is found that, however, we find in "The School of Athens" a group of gentlemen. High moral and intellectual qualities are shown in calm, refined, graceful, and noble manners, attitudes, and draperies. We are in the presence of the noblest faculties of man, clothed with the most refined and idealized personification. In "Paul Preaching," on the other hand, we find an inferior class of persons. They are not a select group, accidentally assembled. Their expressions, and attitudes, are lower, but they are still specimens of humanity. The penetration and power of the argument, which led Raphael to make such distinctions, is admirable and wonderful.

7. THE CHARGE TO ST PETER.\*—"Feed my Sheep."

Christ is standing and pointing with the right hand towards the sheep; his left hand is extended towards Peter, who kneels at his feet. The other ten apostles stand behind him with various gestures and expression, to the words of the charge. The background is a landscape, and on the right the Lake of Galilee and a fisher's bark.

In this picture Christ stands at full length, facing towards the spectator. Raphael has been careful to give him a brain of an average size, with a moderate amount of intellect. His benevolence and Veneration are well developed, but his Wonder is deficient, and the expression of his countenance corresponds with this combination of qualities. He is a sober, serious, good man, taking leave of his mortal life. He is deficient in depth of thought, weight and



same forms and expression appear in two others, whose full faces are presented to the spectator. The whole picture appears to me to be much inferior in vigour and inspiration to several others of the cartoons.

Here I beg leave to close my remarks on Raphael and his works. I fear that to many of your readers they may have appeared tedious and uninteresting; but I hope that to the thoroughly instructed phrenologist some principles may have been stated, which may serve to direct his judgment in criticising works of art. I have aimed also at shewing that the highest genius, placed in the most favourable circumstances, cannot, without the science of his art, *always* attain to the most perfect conceptions of his figures, or preserve the consistency of nature in working out his details. If I have cited few, and these only the most popular authorities, in regard to the opinions, which I have either approved of or ventured to controvert, it is because, in the works on art which I have read, I have succeeded in finding but little sound or serviceable philosophy. The Discourses of Sir Joshua Reynolds, and the criticisms of Kugler and Mrs Jameson, appear to me to be more generally characterised by solid sense and truth, than the works of many other authors; and it is on this account that I have confined my citations chiefly to them. Many of Mr Haydon's principles of art also are sound, and were drawn by him avowedly from Phrenology; but his knowledge of the science was only general and superficial. The merits of the principles of criticism now propounded can be competently judged of by those only who are to some extent physiologists, phrenologists, and observers of life and manners, as well as students of art; and by the judgment of such I am ready to stand or fall.

GEO. COMRE.

45 MELVILLE STREET, EDINBURGH,  
20th August 1846.

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IV. *The Character of the Cingalese phrenologically considered.*  
Read before the Ceylon Branch of the Asiatic Society  
of Great Britain, in August 1845, by J. G. DAVEY, M.D.\*

The social position of nations, equally with that of the individual, is satisfactorily explained by a reference to the cere-

\* Abridged from the *Ceylon Overland Observer* (Colombo) of 15th April 1846, where Dr Davey published his essay in consequence of the decision of the

should be allowed to observe, that Blumenbach, the eminent German physiologist, divides the human varieties, viz., the Circassian, the Mongol, the American, and the Malay. It is not this classification of the human species is complete; all that can be said of it is, that it is a list of prominent characteristics of mankind. There is a great number of people scattered throughout the continents of Asia, Africa, and America, which do not possess a character as to render it doubtful to which of the varieties of Blumenbach they may belong. It is, however, of much importance, and of

The Circassian variety of man, to which I refer, is remarkable for its fine bodily formation. The face is well proportioned; the forehead is broad and high, the nose is handsome, and the features delicately and harmoniously arranged. The Circassian or Caucasian is eminent in all those mental and corporeal qualities which distinguish man from brutes. It is to this variety that Milton's lines apply—

“ For contemplation he and valour  
For softness she, and sweet attrac-

The intellectual faculties of its individuals are capable of the highest cultivation, while the senses of hearing and seeing, are much less acute than in the brute. Philosophy and the fine arts flourish in it as in the most fertile soil. To the vigorous constitution, the animal qualities of the Caucasian, much more than the mental qualities, occupy a prominent position in this world's history.

The Committee of Management of the Society that it should be allowed to observe, that Blumenbach, the eminent German physiologist, divides the human varieties, viz., the Circassian, the Mongol, the American, and the Malay. It is not this classification of the human species is complete; all that can be said of it is, that it is a list of prominent characteristics of mankind. There is a great number of people scattered throughout the continents of Asia, Africa, and America, which do not possess a character as to render it doubtful to which of the varieties of Blumenbach they may belong. It is, however, of much importance, and of

veloped brain alone must be referred the very marked progress of the Circassian race towards civilization. The ample brain it is which has placed this variety of mankind at so immeasurable a distance beyond every other. To it, we owe nearly all that dignifies the name and enhances the happiness of the human being. All that we possess of written literature—from the poetic, historical, and philosophic treasures of Greece and Rome, and the romantic creations of Arabian fancy, to the productions of the modern press—has emanated from the Caucasian variety of mankind. Aristotle, Plato, Homer, Cæsar, and Euclid, among the ancients, were of this variety; and so were Newton, Bacon, Locke, Milton, and Shakspeare. The arts and sciences are almost exclusively known to this people. \* \* \* Not only are we indebted to the Caucasian family of mankind for free political institutions, elective senates, and jury trials; for the compass, the steam-engine, and chronometer, not forgetting, too, the art of printing; but also must acknowledge it to have been the first to raise Woman from the condition of a slave to that of an equal with Man, and thereby make her a partner in his joys and sorrows, his hopes and fears. The happy combination of intellect and courage in the Caucasian variety has enabled it to subjugate the entire world; before its superior resources every other people has successively yielded. Would that I could add that the conquering European has never abused his great power.

The Mongolian variety, of which the Chinese may be taken as an example, though possessed of excellent natural abilities, and presenting in its social and political condition very marked evidences of an advanced civilization, yet cannot be put on a level with the Caucasian. Professor Broussais says, that the Chinese nation is, perhaps, the best organised that we are acquainted with; the intellectual organs are large; the nation produces philosophers, theologians, and some profound thinkers; but their knowledge of the natural world, which can alone correct the notions of man, is imperfect; and whenever the Chinese intelligence quits the arts in which it excels, its operations are confined to the innumerable signs of a language too long for the life of man to comprehend, and thus produce nothing but ontological chimeras. Should the day arrive when the Chinese nation, having reformed its language and thrown aside its prejudice, shall throw open its cities to free communication with the rest of mankind, and send its children to be educated in our capitals, and initiated in our acquirements, the progress of the nation will undoubtedly be rapid and immense.

animal; so feeble are his moral and intellectual faculties, that his time is necessarily consumed in the gratification of his animal wants, and in sleep. Were this man more highly organised than they are, they would have long since discovered the arts of civilization for themselves, as men certainly have. Of the Ethiopian [Man], the New Hollander presents the most degraded of the animal. He is described by Pheron as the most disgusting moral, as well as physically, it is possible to conceive. His remorseless barbarity to women and children, immoderate intemperance, the most trivial affronts, and his want of any principle, are said to be hardly redeemed by the slightest degree of goodness.

The American variety of mankind, though possessing indomitable animal courage, and great energy, nevertheless presents a sad and humiliating human degradation. In making this observation, I have it understood that I do not include in this class of human species, either a very large portion of the extreme north of this great continent, nor the tribes asserted, are of Mongolian extraction, and in the early period crossed from the Asiatic shore through the Straits, to America, and among whom it has been often met with lofty sentiments of independence, courage, and devoted friendship, which would compare with the most splendid similar examples of the highly gifted races;"—I say, I do not include the Toltec races, as the Mexicans, Peruvians, &c. who, at least, are capable of a high destiny and a noble advancement in civilization. Professor Wilson has defined the true American character thus:—"The



foot on their soil. Partial exceptions to this description, as Mr Combe observes, may be found in some of the Southern districts of North America; but the numbers who have adopted the modes of civilized life are so small, and the progress made by them so limited, that, speaking of the race, I do not exaggerate in saying that they remain to the present hour enveloped in all their primitive barbarity, and that they have profited nothing by the introduction among them of Arts, Sciences, and Philosophy.

The Malay variety of man is, by some naturalists, described as holding an intermediate rank between the Circassian and the Ethiopian. The moral character of the Malays, generally speaking, is of an inferior order. They are possessed of a peculiarly active temperament, and are said to be fond of maritime enterprisc. They exhibit considerable intellectual capacity, and are an ingenious people. The political condition of the Malays partakes of that character which naturally belongs to a people of their mental attributes. Their form of government is essentially monarchical; and although their laws and institutions partake of a large amount of the selfish and exclusive principle, they are nevertheless infused with a full share of reason.

Such, then, are the five varieties of mankind adopted by Blumenbach, who is followed by most modern philosophers. I have here some drawings which represent very faithfully the Circassian, Mongolian, Ethiopian, American, and Malay. Of the first three are here shewn very correct drawings of the skull: it is quite impossible for any one to look at these, and not to be directly struck with their strong dissimilarity. Regarding the form and size of the skull as indicative of the form and size of the brain, and looking on the latter as the index of the mental capacities and inclinations of the individual, we must be convinced, that to each one of the three must have belonged very distinct and permanent features of character, and which of course now belong to their successors. We can have no difficulty in making choice of the position held by the Ceylonese among these several varieties described. I have here a very beautiful and correct portraiture of a Cingalese skull. If you look at it critically you will perceive that it more nearly resembles the Circassian than any other; their general character is to a certain extent alike, though, as I shall explain, they differ much in certain particulars.

In judging of the peculiarities of any one of the many subdivisions of the Caucasian variety (as of the Hindoo or Cingalese), we must, of course, be influenced by those general principles which are invariably recognised in our examination

invariably exhibit a very marked coincidence of characters and most distinguished endowments. It may be conjoined with a good organization, and in other words, that the varieties of man, in capacity for knowledge and reflection, among the human species, must be referred to those cerebral organization which are indicated by the differences in the shape of the skull; the comparison of the crania of the white and dark races affords a explanation is afforded of the superiority of the former, and of the inferior subordinate position of the latter have been irrevocably doomed; that is, adduced, either of nations having such a small brain and head as that which characterises the inferior of man, placed under favourable circumstances, would development of their moral and intellectual powers, advancing beyond the point which has been reached by the African or American tribes of the present time, organized like the inferior varieties, and restricted by the same circumstances, that degree of moral and intellectual development which exists in the several polished countries—the preceding data will be overturned; and if instances can be brought forward, the contrary to the marked differences between the white and dark divisions of our species arise from original differences of organization, and not from adventitious causes, it remains unshaken.

In order, then, to possess a clear idea of the development of the Cingalese, I would have compared the skull of this people with that of a European and an Ethiopian on the other. Such a comparison, I think, induce you to agree with me.

brain, or the organs of the animal propensities. In short, the cerebral conformation of the European indicates a higher natural power of reflection, and a greater natural tendency to justice, benevolence, veneration, and refinement, than that of the Cingalese. I here present to your notice a drawing of two skulls, the one a European and the other a Cingalese, and both, of course, Circassian or Caucasian. I beg you to compare the Ethiopian cranial development with them; the contrast cannot fail to strike one as very remarkable and interesting. The low and receding forehead, the depressed coronal region, and the largely developed posterior and inferior regions of the brain of the Ethiopian or New Hollander, plainly bespeak their lost and unhappy condition. The position of Ceylon, then, in the world's history, is fully explained to us. The very moderate intellectual powers of the Cingalese, as indicated by the form of the forehead, would naturally render them, as a people, the dupes of a designing and selfish aristocracy or priesthood. Their timid disposition, and easy and enduring character, their want of a proper courage or spirit of contention, as plainly indicated, too, in their cerebral configuration, has rendered them very little else than the slaves of succeeding powers—as the Malabars, the Portuguese, Dutch, and English. These several nations possess the combative propensity in great vigour, whereas the Cingalese have it not. The propensities most active in them are cunning, pride, the love of gain, and the love of offspring. If you look to the skulls of the Cingalese, you will not fail to observe that those parts of the brain which infuse an energy and force of character into the individual, in short, the combative and destructive propensities, are sadly deficient. I here present to you the drawings of two skulls, a Cingalese and a Tardy [?], in which this fact is plainly demonstrated. In the Hindoo head the very same fact obtains; and therefore it is that we have seen millions of both Cingalese and Hindoos conquered by a mere handful of Europeans, and kept by them in a state of mere servitude. What the Cingalese want in energy and force of character, they compensate by extreme cunning and cautiousness, qualities which are as plainly indicated in their cerebral configuration, as is their muscular strength and mode of progression by their physical organization. \* \* \* \*

The observations above made on the various races of man are, of course, intended to be considered in a general sense, rather than in a particular one; their general truth is proved by a reference to the following table of Professor Morton's, which demonstrates the relative capacity of the skulls of all the varieties of mankind. The advantage is plainly shewn

formidable enemy in one of the Cingalese king whose great energy and bravery were indeed and equalled only by the signal ability and discretion which he carried out his plans. How unlike been to his apathetic countrymen. He is a Knighton as the Hannibal or Cæsar of this island. I may mention, too, Praakrama Bahoo, a Cingalese who lived in 1153 (A.D.), who is described by me in his Epitome of the History of Ceylon, as a man of great talents and energy of purpose. By his only were internal dissensions of a very formidable nature put down, and peace restored. The foreign powers of Cambodia and India were expelled, and full restitution obtained from them for what had been offered and experienced at their hands. The ordinances of Buddhism were re-established, and improvements of immense importance effected in the buildings, canals, and tanks, owed their existence to his public zeal. The fortifications, too, which he had erected, gave strong indications of his talents. The Cingalese, however, are not so many Praakramas, and therefore it is that we English are lords of the island in common form in the entire skull, and a common form in the different organs, pervades the 40 or 50 in the Phrenological Society's museum at Mr Combe, to which the head of Rammohun constituted a remarkable exception. The head of this celebrated man in size and combination, resembles the skull of the race of Celts and Germans in Europe; but it is common in his own country. The Negro Cap biographical notice is to be found in Mr Lav



sentiment, feeling, or propensity. In such a case, the particular disposition would be the effect of his individual cerebral conformation. In the endless diversity of individual forms, says Mr Lawrence, many instances are met with, in each variety of mankind, of organizations approaching to that of the others; so that among many Europeans and Negroes we might select skulls in which it would be difficult to determine the predominant character of the numerous tribes or nations in each division; some come nearer to one, and some to the other, of the two immediately adjoining varieties. We must, therefore, conclude that the diversities of features and of skulls are not sufficient to authorise us in assigning the different races of mankind in which they occur to species originally different. This conclusion will be strengthened by the analogies of natural history. The differences between human crania are not more considerable, nor even so remarkable, as some variations which occur in animals confessedly of the same species. \* \* \* However, without dwelling on this matter, I will, in conclusion, briefly allude to the practical inferences from the foregoing observations. If the favourable exceptions to a rule just now mentioned, in the persons of the Cingalese kings, Rammohun Roy, and the Negro Capitein, have occurred spontaneously, it may be asked, Might we not take the hint and cultivate such, and hereby elevate the whole human race, and introduce among them the arts and sciences of civilized life? There can be little doubt that, supposing the inferior races of man were placed under the most favourable circumstances for the development of the higher mental powers, they would be very materially benefited—that certain faculties once feeble would be then seen to take in an increased activity, proportionate to the stimuli offered to them—that in fact an important step would then have been made towards their amelioration and advancement, and very probably the number of such exceptions as those I have mentioned would be increased. But I would nevertheless caution the enthusiastic philanthropist, and beg him to moderate his expectation, if he were to imagine that any kind of educational means could elevate the Ethiopian, Carib, or New Hollander, or even the American and Malay—including, too, the Cingalese—to an intellectual and moral equality with the European. It is the expressed opinion of Cuvier, Blumenbach, Buffon, Camper, Gall, Lawrence, Spurzheim, Elliotson, Abernethy, Hunter, and a host of naturalists and physiologists of unexceptionable authority, that the type of every living thing is unchangeable, that circumstances of whatever kind, whether accidental or acquired, can only modify its physical or organic conditions, and that

age as his wife. They were not related

Both were stout and healthy at the time, and the mother is so still. The father was in the open air. One day, in the month of summer, he was exposed to a violent chill of cold, and afterwards exhibited symptoms of pulmonary disease. He seemed to recover to some extent during the summer, but as winter approached he grew worse, and died in January 1845. His son was born in April following; his existence throughout an advanced period of his father's illness. The mother, an affectionate wife, was naturally much grieved by the illness and death of her husband; and to her I have largely attributed the malformed brain of her child. I doubt the soundness of this opinion. She was a prudent woman, and healthy, as I have said; it is not probable that she mourned the loss of her husband so sincerely; but I have no reason to think that her grief went beyond all ordinary bounds in similar cases, or in any unusual degree likely to affect the health of the foetal existence. The impaired health of the mother at the time from which the child's existence dated, may lead me to mind the most probable cause of the malformation, but I have thought it right to state all the facts which are essential to be known. I regret that an opportunity was prevented me obtaining a cast of the body after post-mortem examination; but so far as I can judge from external appearances, nothing additional could be given on similar cases could have in this case.

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previously told that he was a wonderful example of hereditary mental faculties, the exhibition of which was, in his case, as strong and characteristic, as if the son of a Cuvier, for instance, had given, even from boyhood, indications of a genius equal to his father's for the natural sciences. As soon as I saw him, I perceived that some good-natured imposition had been practised upon me. He was of a nervous-lymphatic temperament, with fair and nearly pearl-coloured hair, and squinting eyes. The outline of his very pale face was oval, with a narrow, low, and retreating forehead, the frontal protuberances of which were but slightly marked. The whole of the back of his head was of an enormous size; and, what struck me most, the posterior two-thirds of the squamous suture of the temporal bone presented a remarkably elevated convexity of a longitudinal segment of an ovoid. These were the boy's characteristic features. I asked, as if in jest, whether his father was a butcher. The answer was, that his father belonged to a wealthy and genteel family, and that he had gone through a regular course of studies at one of the universities. On my declaring that I was unable to discover in the boy any other mark of predominant psychical tendencies than that of an instinctive propensity to destruction and murder, the following statement was made, before two witnesses, by an enlightened and most worthy priest, whose efforts were at the time directed to counteract, by education, the evil propensities in the boy's nature.\* "This boy is exceedingly fond of handling knives; he constantly tries to steal one away from the dinner-table, that he may go out and play with it. His knife-playing consists in running against any one who comes near him, both with threatening gestures and words. He always uses the following Italian phrase—'Guarda che ti ammazzo'—'Take care, or I'll murder you.' When he cannot get at a knife, he will lay hold of a nail, or a piece of wood, and go with it to his favourite sport. He will turn his weapons even against his mother, whenever she attempts to dispossess him of them. When he is alone, he attacks the walls and household furniture, trying to pierce them with his iron instrument, and still exclaiming, as usual, 'Guarda che ti ammazzo.' He will sometimes even turn it upon himself, muttering, 'I'll murder myself.'" I asked how he could possibly have inherited such a murderous disposition from a

\* All matter-of-fact details contained in this statement are authenticated by autographic documents, which may be seen upon application to the Abbé Restani [at Milan].

derers. What it concerns us to know, and established, is, that this man became the autl life at a time when he had just committed a gret that I have not been able to collect in the uterine stage of this boy's existence; and had any opportunity of examining him again broken down with grief at seeing in her child of his father's disposition, is anxious to with general observation.\*

We have here a striking confirmation of Gall's system, which indeed scarcely needs a when the facts which establish it have becor as to render it all but hopeless ever to count with an equal number of facts of an opposite

This is not, however, the object of the pro cation. Besides that, we have here a singul of cerebral influence upon the act of generati

[The writer adds some speculations on th which we omit as too purely hypothetical to All that can be warrantably affirmed appears father's sanguinary disposition was transmit and that, probably, the circumstances in whic produced gave still greater strength to the dency than it would otherwise have had.—E

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## II. NOTICES OF BOOKS.

- I. *Observations and Essays on the Statistics*  
By JOHN THURNAM, Resident Medical S  
the Retreat, near York. London: Simpki



employed. The greatest sagacity is necessary to distinguish the degree of importance to be attached to each influencing element, and we have frequent proofs that even clever men have been led into absurdities by ascribing to certain causes, influences produced by other causes which they had neglected to take into consideration."—(P. viii.) Dr Thurnam shews himself deeply convinced of the truth here enunciated; and his work is an elaborate, valuable, and praiseworthy contribution towards the improvement of the statistics of insanity, and the drawing of just conclusions from numerical data when obtained. "Whilst I contend," says he, "for the utility, present and prospective, of carefully reported numerical statements of the results obtained in asylums and hospitals for the insane, I freely admit that the way in which tables are frequently presented in reports, as proofs of certain conclusions, is empirical and unsound. The statistical returns form only a part of the data necessary for a right comparison of the results obtained in different establishments; and the circumstances which remain unfigured would doubtless, if obtained, in many instances lead us altogether to reverse our judgment. In such cases of hasty induction, however, the error is in the logic rather than in the statistics. A primary object of the following pages is the attempt to shew how far, and in what manner, such comparisons are warranted in the present condition of the statistics of asylums, and to advocate various methods for the improvement of these statistics. Because the information we obtain from this source, whether from inherent or accidental causes, is more or less imperfect in its character, we are not, I think, justified in neglecting numerical returns altogether. Rather, on the contrary, let us mortify that spirit of crude and over hasty generalization, which has been well stated, by a distinguished philosopher, to be a prevailing error of the present age, and let us apply ourselves to the careful observation and registration of facts, and to the cautious deduction of inferences from them."—(P. vii.)

The work is divided into three chapters:—I. On the methods of deducing and exhibiting the results of treatment; and on the circumstances in the character of the cases admitted, capable of influencing their results;—II. On the influence exerted on the statistical results, by the several particulars of treatment, in asylums and hospitals for the insane;—III. On the results of treatment in the principal asylums and hospitals for the insane, in Great Britain and Ireland, the United States of America, and Continental Europe. Three essays follow:—I. On the relative liability of

tics will doubtless resort for information. We propose merely to select a few of the able to our pages, and most likely to be instructive to the phrenological reader.

In a note on p. 47, the author refers to a paper expressed by Sir Alexander Crichton, lest law and medicine should attempt "to cure insanity, and consequently to condemn to punishment." We do not sympathize with the venerable physician, but think with Dr. Thurnam, "the general disposition to extend the operation of the law in criminal cases is in a great measure a more enlarged and correct estimate of justice on our mental condition, and moral responsibility; and that so far it shows a sign of a change in the right direction. "It may be," says Dr Thurnam, "the question of the highest importance, both as regards the interests of the insane on the one hand, and the claims of humanity on the other. In the investigation of criminal cases in which insanity is urged, the greatest care is called for to avoid the folly and barbarity of inflicting punishment on an unhappy victim of a disordered mind: and we be not imposed on by feigned insanity, in cases in which it cannot properly be pleaded. If it are indeed, it will be allowed by all who are acquainted with the facts of the numerous instances of observing the insane, numerous and even of more general, mental disorders, persons who are perfectly able to distinguish between right and wrong, in whom the moral sense is neither obliterated nor perverted, and in whom responsibility to the law is not directly connected with some

it; and in such cases the accused ought to have the full benefit of every reasonable doubt. But whilst we admit this frequent impairment of the moral sense and feelings in the partially insane, we must not forget that there are few in whom the powers of the will, the reason, and the conscience are so far undermined, as to render them altogether incapable of self-control, and consequently irresponsible. Most of the improvements which, of late years, have taken place in the treatment of the insane, have flowed from the more decided recognition of the principle of more or less power of self-control remaining in the insane; and there could hardly be anything more inconsistent with modern, and, as I believe, correct, views of moral treatment than the adoption by medical or legal authorities, or by any considerable part of the public press, of the doctrine that the plea of insanity in *all* cases of crime, in the *partially insane*, ought to be admitted in bar of punishment. There can indeed be no doubt that the fear of disgrace and of punishment operates strongly and often salutarily on many more or less partially disordered minds; and if in our courts of justice, the plea in question should come to be indiscriminately admitted in all cases of partial insanity, one strong incentive to self-restraint, one important aid in the proper treatment of mental disorders, would doubtless be withdrawn, and with what amount of evil result to society I will not here presume to determine. It can never be too fully impressed on the minds of medical witnesses, in cases which involve this plea, that there is no definition or test of insanity that will apply to all cases, and that the interests of society and of humanity alike demand that every case should be judged by its own merits, and not by reference to any single test or standard whatever."—(P. 48.)

The following remarks on the duty of the sane to the insane will meet with a response in every well-constituted mind:—

There are not, and cannot be, two opinions as to its being the duty of those entrusted with the care of the insane, to use every possible means to promote their recovery; but, as has been observed by an anonymous but eloquent writer, it was asked by Plato, as it is sometimes asked even at the present day, "What has society to gain by the protracted existence of lunatics? What, in England, too, whose population according to some philosophers, is increasing so much faster than subsistence? Much. It is a law of nature that every man should be liable to innumerable diseases,—secure from none. No one can look forward with certainty to a constantly serene course. The heart that beats well to-night may fail on the morrow; the subtle brain, playing in all its might, and throwing off thick-coming thoughts, may in a day be cast into irreparable

you count in all your calculations,—desert you if  
Oh ! there are many ways to madness.

“ What, then, sustains the provident citizen und  
hang like threatening clouds over his life, and the  
friends ? Is it not the consciousness that if disease shou  
will be employed calculated to restore the body to  
affliction prove lasting, it will be out-lived by tender  
the head will be let fall gently upon the breast of t

To these considerations, so eloquently stated, it  
the impossibility of, in many instances, determining  
case passes from the curable into the incurable stag  
quent occurrence of recovery after the expiration of  
make us hesitate in withdrawing any of those atte  
they hold out the best hope of restoration to the  
the most calculated to ensure the bodily health an  
curable insane.—(Pp. 58-9.)

In Chapter II. Dr Thurnam considers the  
conditions during the treatment of the in  
heads of, 1. Healthiness of the locality in  
is situated, as influenced by climate, elevati  
&c. ; 2. General adaptation and appropriat  
the buildings ; 3. Means for exercise, occup  
ment ; 4. Internal economy and governm  
attendants ; 5. Ventilation, lighting, warr  
ness of the apartments occupied by the in  
by the population or numbers treated in th  
Clothing and personal cleanliness, baths, .  
This section is full of sound remarks and u  
With respect to diet he observes : “ It a  
generally allowed that the insane as a clas  
deed without exception, require a libera  
though simple, diet. The mere change ind  
into a pauper asylum, from a scanty to a l



of the patients should not be forgotten; and whilst, on the one hand, the error of a too scanty diet should be avoided, that of a too stimulating and highly animalized one should be equally so on the other. As a general rule, the diet for all classes of the insane should be approximated to that of the respectable middle classes of this country; that of the insane pauper being somewhat more liberal and nutritious than he usually, or at least frequently, meets with in his own cottage; whilst that of the wealthy insane person should be simpler and plainer than that of which he generally partakes at his own table."—(P. 90.) It appears that in the existing large asylums there is such a difference in the quantity and description of the food as would demand enquiry and equalization, even if there were no reason to infer that diet has so great an influence on recovery as it seems to have. "In the three asylums with the more liberal diet, we find that the recoveries averaged 43·7 per cent., and that the mean mortality was 9·35 per cent.; whilst in the four institutions in which the diet was less liberal and nutritious, the recoveries only averaged 36·75 per cent, and the mean mortality was as high as 14·54 per cent. It must not, however, be forgotten that there may be, and no doubt are, other circumstances in the condition of these asylums, which materially influence the results of treatment, and which will thus explain many of the discrepancies in the results which the table exhibits;\* but, though this is the case, I cannot but conclude that the amount of difference which does exist, is in great measure dependant upon the difference in the diet."—(P. 96.)

The author next proceeds to consider the medical treatment of the insane; which he does under the two heads of "Physical and pharmaceutic treatment," and "Moral treatment"—the latter including "prevention of injury—restraint;" "removal of exciting and aggravating causes;" and "diversion of attention from morbid trains of thought." Dr Thurnam disapproves of personal restraint, except in rare instances. "That the insane," says he, "may, in all cases, be governed by purely moral means, I suppose all will regard as an untenable position; but still I believe we may conclude that there is no circumstance which more decidedly marks a faulty system, and none which is likely to be attended with more unfavourable results, than an unrestrained use of

\* "Thus the three asylums in which the diet is more liberal all receive a limited proportion of patients of the upper class; whilst, with the exception of Suffolk, those of the other group are almost exclusively devoted to pauper patients. This would tend to give a somewhat more favourable aspect to the results in the three first institutions, but could not altogether explain the actual difference."

the means of personal restraint, whether these consist in long continued seclusion, or in the mechanical restraint of the body or its members, either by instrumental means, or, what is usually worse, by the physical and manual force of the attendants . . . Whilst on the one hand I cannot doubt that the course and duration of many cases has been mitigated and shortened, and the character of the disorder rendered less virulent, by the disuse of restraint, I must here state, that occasional inconvenience in the shape of alarm, and of interruption to the quiet of other patients, and also as regards the destruction of clothing and the breakage of glass, have, on the other hand, been connected with it. On the whole, however, that greater vigilance and forbearance on the part of the attendants, which, under competent superintendence, the comparative disuse of personal restraint more or less necessarily implies, have, I feel no hesitation in saying, been attended with a decided increase of comfort and decrease of irritation in those divisions of the establishment in which instruments of restraint were formerly not unfrequently resorted to."—(Pp 104-5.)

With respect to the application of religious worship and instruction in the moral treatment of insanity, Dr Thurnam makes some remarks which may be usefully kept in mind without, as well as within, the walls of lunatic asylums :—

There can, now, (says he) be no doubt that a large proportion of the inmates of an hospital for the insane are capable of deriving instruction and advantage from that form of religious worship to which they have been accustomed, when this is modified so as, in the main, to suit their peculiar circumstances. It hence becomes an obvious duty to provide the means of public worship in every establishment for the insane. In the public ministrations of the chaplain of an asylum, which on any one occasion should rarely occupy so long a period as an hour, it will be necessary for him to remember that he has a congregation which in great measure consists of the excitable and hysterical on the one hand, and of the melancholic and desponding on the other; and that in both classes there are probably those who are the subjects of hallucinations of a religious character. Under such circumstances, the first endeavour of a judicious clergyman will, at the least, be to do no harm; and in his short discourses, he will hence avoid much that would be suited to the circumstances of a more sane congregation. Avoiding argumentative and doctrinal topics, his addresses, without being altogether one-sided, will be characterized by their simplicity, and by the inculcation of that calm and hopeful faith which are so appropriate to the circumstances of his auditory. In his more private ministrations, in individual cases, the chaplain should always act with the knowledge and concurrence of the superintending physician; to whom he has it in his power to render essential service. Even as regards those portions of the sacred volume

which are read to the insane, there is room for judgment in the selection. From retaliation and revenge being permitted by its moral code, and from the typical and poetical character of many of its books, many parts of the Old Testament are peculiarly open to misapplication by the insane; and we have it on the highest testimony that many of the Epistles contain 'things hard to be understood,' which are liable to be wrested by the 'unlearned and unstable.' On the whole, the narrative parts of the New Testament,—which in combination with more didactic lessons, present us with pictures of the highest excellence,—with well selected portions of the Psalms, appear to be those which, for public reading, are most suited to the condition of a large majority of the insane.—(Pp. 107-8.)

The author concludes the section on the moral treatment of the insane by remarking that he might "have pointed out the numerous points of contact between the moral and the physical, or, as it is often called, the medical, treatment. This however," says he, "is hardly necessary; for all who are practically acquainted with the management of the insane must be aware that the two are virtually inseparable. 'Mind and matter are too closely combined to be studied or treated apart. To medicine alone it belongs to contemplate and to treat THE ENTIRE MAN—PHYSICAL, MORAL, AND INTELLECTUAL.' \*"—(P. 112.)

The next section is devoted to the illustration, from the history of the "York Lunatic Asylum," of the influence of hygienic and moral treatment of the insane. Of the horrors of which that Asylum exhibited in former times we have spoken elsewhere (vol. xvi., p. 211), and the reader will not be sorry if we spare his feelings a repetition of the harrowing details. "The whole history," says Dr Thurnam, "is one which should possess extreme interest to all persons connected with the care and management of asylums and hospitals for the insane; and I feel that in introducing this sketch of it here, I am keeping before our view, an example which is pregnant both with instruction and warning, and that, in addition to my more immediate object, I am at the same time contributing my mite to the real interests of the insane."—(P. 132.)

With respect to "the relative liability to insanity at different ages"—the subject of his second "Essay"—Dr Thurnam finds that although, as regards England and Wales, the data are too limited to warrant his drawing any positive inferences from them as to the *absolute liability*, yet they may

\* "What," Dr Williams adds, "can I say more of the intellectual greatness of our art?" *Principles of Medicine*, by Charles J. B. Williams, M.D., F.R.S. 1843, p. 34.



than at the earlier stages of life, he finds that twice as great from 30 to 40 as from 50 to 60, and much more than twice as great at this period as subsequent to 60. This general conclusion, he might *a priori* have been expected, considering exposure of the mental feelings and powers to irregular action at the earlier ages.

In his third "Essay" the author shews that yet been *ascertained* about the relative liability of insanity; and expresses the opinion that "though materials which may contribute towards our forming a relation to it, are gradually becoming more correct, it is still very doubtful whether we shall be able to draw a strict comparison between the number insane in the Society of Friends and those in the world at large.\* Having, then, no means of determining on statistical grounds, whether the liability to mental disease in this community be greater or less than it is in the world at large, our experience of the very frequent fallacy of *a priori* conclusions on general questions of all descriptions forbids us to hazard a positive opinion on the subject." (P. 181.) He proceeds:—

If we look at the opinions which have been entertained on this subject, we find that Dr Burrows believes that the proportion of insanity is decidedly greater in the Society of Friends than in the world at large; and he accounts for the supposed fact by the circumstance of their marriages being confined to the families of the Society, and therefore, as he thinks, within a very limited circle. The opinion of Dr Burrows appears to have obtained very generally among writers of all descriptions in this country; and there is no question relative to the fact that the proportion of insanity is



treatise we select the following passages :—

*Weakness or Perversity of Mind in Young Persons.*—  
few patients brought under the care of asylums who, though requiring some degree of restraint, are hardly proper objects for the decidedly insane. Cases of this kind I have met with in persons, generally young men, hardly of adult age, who in consequence of an original defect of capacity or natural perversity of disposition, or some accidentally untoward circumstances, have never benefited, nor had their education satisfactorily carried on. They are circumstanced, as they approach maturity, and when fully developed in their full vigour, become not unfrequently a source of anxiety to their friends; and in some cases, by acts of violence, and in others, by a more or less constant wayward conduct, they excite so much apprehension as to require being placed under restraint. In some cases of this kind which come under my notice, there have been no grounds for supposing the existence of any physical or organic cause, nor could any form of insanity be traced. Indeed, upon being placed under restraint, no traces of excitement or traces of disorder have disappeared. Moral treatment; the inculcation of correct views of life, the principles of action; the inuring to regular habits, and the supply of suitable food for the mind; in short, a sustained system of management, what is mainly required in such cases; though occupation and exercise for the body, or physical education, would be a valuable auxiliary. The treatment required is hygienic and preventive rather than curative; and I should therefore rejoice, if, by the aid of the age, an "Orthophrenic Institution," worthy of the name, were ever established. The objects of such an establishment would be persons predisposed to mental disorders, but in whom insanity, in the strict acceptation of the term, cannot be regarded as actually existing. If left to themselves, moral insanity, or some other form of disorder, would almost certainly arise. For many reasons, it is desirable that such cases should be treated in hospitals for the insane, and should be brought into contact with disordered minds.

*Condition of Patients in reference to Marriage.*—Table 8.—Of the whole number admitted, two-thirds, or 66 per cent. (64 per cent. for the men, and 68 for the women), had never been married. It is scarcely necessary to say, that this is out of all proportion to the number of unmarried persons of adult age existing in the Society of Friends. Of those who were, or had been married, one-fifth had never had offspring.

I am indebted to my friend Samuel Tuke for the important remark, that our conclusions as to the influence of celibacy (as, amongst other things, predisposing to insanity), as drawn from a comparison of the numbers of married and unmarried persons admitted into hospitals for the insane, must be allowed to be modified by the consideration that many of the cases occur in a class of persons, as regards mental vigour, less likely to be married than the average of the community at large. In such cases, of course, we must admit that the celibacy is to be regarded as an effect, rather than a cause.—(P. 72.)

*Town and Country Life.*—Table 10.—Of the 415 patients, 228, or about 55 per cent., have been admitted from cities and large towns, including in this class all places having a population much exceeding 5000; 101, or 24 per cent., were from small towns and villages; and 86, or 21 per cent., from more completely rural districts. As there can be no doubt that a much larger proportion than 55 per cent. of the Society of Friends in England, is resident in cities and large towns, there is perhaps some reason for concluding that insanity is somewhat more prevalent in the village and rural, than in the city, population of this community. This is an inference, which though opposed to some of the more generally received opinions as to the positive causes of insanity being often connected with the pursuit of wealth, the spread of luxury, and even with the general progress of knowledge and civilization, is still supported by the results of other researches; and should, at least, put us upon our guard against those less obvious and more negative causes of mental disorder, which may be more peculiar to a country life. It must, nevertheless, be granted that the inferences we form from these statements, should not be too positive. It may be, that young persons who are deficient in mental power or in self-government, and who are so far more exposed to insanity, are not only more frequently put to agricultural pursuits by their friends; but that such individuals, in after life, will generally be but little inclined to exchange their rural pursuits for those of a city.—(P. 73.)

*Insane Children of Healthy Cousins.*—Though not given in the table, it may be stated as a curious fact that three persons, consisting also of a brother and two sisters, were admitted, who were supposed by their friends to have been predisposed to insanity, from being the offspring of first cousins. The parents were respectable, well-educated persons, considered more than usually intelligent, and without any known hereditary tendency to insanity. They had a family of one son and seven daughters; and it appears that, with but one or two exceptions, more or less singularity or weakness existed in such of them as did not actually become insane. The case seems worthy of notice in reference to the somewhat popular opinion of the undesirableness of such connections. The marriage of first cousins being of unfrequent occurrence in, and forbidden by the rules of, the Society of Friends, may account, if, as appears

posing cause ; confirming the remark, that in sedation of the disease appears to have been laid :  
gence in early life ; by which the ill trained man  
contact with the oppositions and difficulties of  
habits of endurance or self-government.—(P. 79)

*Intemperance and Insanity.*—Excepting in  
alcoholic and fermented liquors, no particular re  
exciting causes which follow in the table, though  
very important, appears to be called for. The  
connected with the Society of Friends, in whom int  
was supposed to have operated as an exciting ca  
was twenty-one. Of this number five were fema  
also addicted to the use of opium. There were  
in whom intemperance and free living were thoug  
disposing causes. This is a somewhat larger nu  
previously been computed as connected with th  
being attributable to further information respectin  
having been subsequently obtained. Of the w  
eight, it may be observed that not more than twel  
Society. This proportion is still a very small one  
usually observed in institutions of this kind. Al  
it must nevertheless be remarked that in sever  
doubtful whether the intemperance which had  
insanity can really be regarded as its cause ; as in  
the amount of intemperance was so small as justly  
respect, being such as, in the world generally, v  
character with respect to temperance ; and, in a  
fully as probable that it was one of the modes in  
manifested itself. Indeed this was so evidently t  
of two of the women, whose cases ought perhaps  
cluded in this table, that the mental disorder und  
has been classed under the head of monomania of  
Table 17).

*Religion and Insanity.*—Great confusion ha  
tinguishing cause and effect, in relation to the in

nected with this kind of cause, is little more than three (3·3) per cent. of the whole number admitted ; which is very small as contrasted with those reported in the published reports of most other public institutions in this kingdom. In connexion with this subject, it may be stated, that during the forty-four years, there have only been four persons in the station of religious ministers in the Society of Friends admitted into the institution ; and that in all of these there were causes for the mental disorder, wholly unconnected with the religious habits or opinions of the individuals. It may perhaps be fairly concluded from the statements now made, that the religious tenets and practices of the Society of Friends are not, as has been sometimes supposed, in themselves, unfavourable to sanity of mind. Looking, indeed, at the question in a more general way, there can be no doubt that those whose minds are influenced by true religion, under whatever form, are less liable to insanity than others. As a learned and excellent physician has well observed, "the moral causes of derangement which would not fail of producing injurious effects on others, prove innocuous in them ; for these causes would be met by controlling and calming considerations and sentiments, such as would deprive them of intensity, or neutralize their effects. Truly religious sentiments and obligations soothe the more turbulent emotions, furnish consolations in afflictions, heal the wounded feelings, administer hopes to the desponding, and arrest the hands of violence and despair."<sup>\*</sup>—(Pp. 82-3.)

Dr Thurnam pays a well merited tribute to Dr Conolly, to whom, he thinks, more than to any other man, we have of late years been "indebted for the patient and self-denying attention which, through good report and through ill report, he has bestowed on the treatment of insanity, in the largest asylum of the kingdom. The results of his labours, as depicted in the annual reports of the Middlesex County Asylum, in his published letters, and clinical lectures,† exhibit the physician who, more than any other, seems to me to have realized the true idea of the medical treatment, moral and physical, of the class of disorders to which he has so zealously devoted himself."

Dr Conolly's admirable lectures in the *Lancet*, here referred to, have been extremely useful in diffusing sound views of insanity and its treatment. The "letters" to which Dr Thurnam alludes are published in the *British and Foreign Medical Review*, Nos. 37 and 38 (Jan. and April 1845), under the title of "Notices of the Lunatic Asylums of Paris, &c." We intended to lay before our readers some extracts from both the letters and the lectures, but hitherto have been prevented from doing so by more urgent demands on our space. In the former, Dr Conolly gives some interesting sketches of

\* Dr Copland. *Dictionary of Practical Medicine*, vol ii, p. 491.

† *Lancet*. 1845-6.



II. *Essays on Human Rights and their Politics*  
By E. P. HURLBUT, Counsellor at Law in New York. With a Preface and Notes by C. G. LORRICK.  
Edinburgh: Maclachlan, Stewart, & Co. Glasgow: W. & A. G. Brown, & Co., London. 1847. Royal 8vo,

The following account of this publication is given in his preface:—

My friend Mr E. P. Hurlbut, the author of the following distinguished barrister in the supreme courts of the United States, and took an active part in the proceedings which led to the adoption of a Convention of delegates to prepare a Revised Constitution for the State in 1846. The following essays, indeed (which were delivered as lectures in New York, and, after being revised, were collected in a volume, published in 1845), were the discussions, but, I believe, led to the adoption of the Constitution by the Convention. I allude to this to shew that Mr Hurlbut is not a mere theorist, but a practical active politician.

The aim of the work is to determine the foundations of government, and the powers with which the Legislature should be invested to enable them to perform their functions to the advantage to the State. In his inquiry into the origin of the author observes that the American Declaration of Independence in 1776 asserted, rather than proved, "the sacred rights of life, liberty, and happiness," and that the essays of the present volume in defence of Republicanism, still fall short of affording a rational philosophy. His object is to supply this want, by views on the basis of universal human nature. "The true nature," says he, "is simply to conform to natural truth, to know himself, and his true relation to his fellow-men and to nature. All truth becomes natural truth—all rights,

of the mind—those which produce civilization—have not yet been fully developed.

Mr Hurlbut lays it down as a principle, that a true science of mind is indispensable to the successful discussion of human rights and their political guaranties: and he adopts the philosophy of Dr Gall, founded on and demonstrable by means of the physiology of the brain, as the basis of his reasoning. The necessity for founding this inquiry on the science of mind becomes apparent from the mere statement of his fundamental principle—namely, that “*Wherever Nature has ordained desire, she has spread before it the means of gratification. From this we infer the right to its indulgence—and hence, also, the rights of man.*” I trust that the adoption of Phrenology by Mr Hurlbut will not deter any who reject that system of mental philosophy from perusing his work; for many who reject the physiological doctrines of Gall, and deny that, even if true, they have any bearing on moral philosophy, may nevertheless agree with the author in attributing to the human mind all or most of the powers and feelings which he enumerates in his first chapter. I have elsewhere said, that in claiming for Phrenology the merit of having unfolded new truths for the guidance of human conduct, there is no wish to go a step beyond the limits warranted by facts. It is admitted that Phrenology has created no new faculty, and that every mental quality of which it treats existed and operated before Dr Gall was born. Phrenology professes not to be more than a description of objects that exist, and their relations. It is quite true that descriptions, more or less accurate, of the general characters and modes of operation of many of the mental faculties, may be found in the works of even the earliest writers. Still, however, owing to their having possessed no sure means (except in the case of the external senses) of distinguishing between what is really a primitive faculty and what is only a mode of action common to many faculties—and owing also to their ignorance of the organs of the mind, and of the effects of size in these organs upon the strength of the functions—their knowledge, as it seems to me, never assumed the certainty and consistency, or reached the full practical character, of a science. In the opinion of phrenologists, the discovery by Dr Gall of the functions of the different parts of the brain has accomplished for mental philosophy what the discoveries of Kepler, Copernicus, Galileo, and Newton had previously done for astronomy; it has substituted a basis of physiological facts ascertainable by observation, for hypothesis and conjecture. It has brought to light several elements of human nature which the metaphysicians had failed to discover, and given certainty to the existence of several which had been with them subjects of dispute; while it has shed a new light on the effects of combinations of the faculties in different degrees of relative strength in different individuals. It has also enabled philosophers to trace the relations between the mind and the external world more successfully than when the mental organs were unknown. But, as I have said, the reader may reject these views, and yet find in Mr Hurlbut's pages much that will interest and instruct him, and command his cordial assent.

“*Man.*” says the author, “has a right to the gratification, indulgence, and exercise of every innate power and faculty of his mind. The exer-

This view of the origin of human rights places them only true and stable foundation, that of nature, and whole code of arbitrary and artificial legislation. It is naturally a moral government of the world to have been and to be actually carried into effect by His wisdom and consequently to be the only safe guide for the enactment of laws. But, for example, finds in man an instinctive love of objects in nature—which may be acquired by skill and labor to gratify it. Nature, then, according to this view, bestowed the desire, and furnished the means of its gratification. It established the right of each individual to hold and retain against all invaders, the objects acquired by his labor. Moreover, nature has prescribed certain conditions to the right, which also are deducible from the faculties of the sentiment of justice, for example, which, while it confirms our title to the acquisitions of our own skill and industry, guards, as equally sacred, the right of every other individual to the enjoyment of the products of his labour and ingenuity.

The distinction between this theory of human rights and my Bentham is evident. "Natural law, natural rights," says Bentham in his "Theory of Legislation" (p. 104), "are two or metaphors, which play so great a part in books of law, deserve to be examined by themselves." "The word law," he says, "the same as the word law, has two senses—the one a proper, a metaphorical sense. Rights, properly so called, are the law properly so called; real laws give birth to real rights. Rights are the creatures of natural law; they are a metaphor. It gives its origin from another metaphor. There is no such thing as natural rights armed with natural rights." Speaking of the same he says (p. 137), "There is no such thing as natural property; it is entirely the work of the law. Property is nothing but an expectation," &c.

Mr Bentham's editor, M. Dumont, in expounding the theory that when Mr Bentham proposes a law, "he does not propose a law, but a corresponding law in the code of nature; and by a consequence

cation of human desires, and the abusive indulgence of them. There is the same difference as between eating and gluttony—between drinking and drunkenness—between mirthfulness and satire—between justice and vengeance."

This brief abstract of the author's fundamental principles, is intended to afford to the reader the means of appreciating the nature and aim of the work, that he may judge for himself whether it merits the trouble of a serious perusal. To me it appears to be highly interesting and instructive, and particularly needed at the present time, when the increased and increasing influence of the public mind over our general legislation, and the loud demands which are so frequently made for government interference and assistance, call for a clear understanding, equally on the part of constituents and representatives, of the real foundations of government and laws, the objects which they are capable of accomplishing, and the means by which these may be most successfully attained.

The political and legal institutions of the United States of North America differ, in several important particulars, from those of Great Britain and Ireland; and the present work being composed by an American lawyer, and addressed to the American people, may be expected to contain views and doctrines more related to the condition of that country than to ours. But as the author throughout his whole disquisitions professes to adopt nature as his authoritative guide, his principles, if true to this standard, must be of universal application; and they may in consequence be found to stand forth only in bolder relief, from their connection with national institutions different from our own. The reader may thus find himself enabled to form a clearer and calmer judgment of their merits, than if they had related more directly to that social state with which all our attachments, prejudices, and predilections are inseparably interwoven from the very dawn of our reason to the day of our death.

The foundations of the work, with few exceptions, appear to me to be solid; the arguments to be profound, clear, and comprehensive; the style simple, forcible, and occasionally eloquent; and the aim of the author throughout to be highly moral and beneficent. I, therefore, respectfully recommend the book to the consideration of British readers. I have added a few notes in elucidation, and occasionally in correction, of the text, where I differed in opinion from the author; but the latter instances are of rare occurrence and of comparatively subordinate importance.

The subjects treated of by Mr Hurlbut are—the origin of human rights—the true function of government—the constitution of government—constitutional limitations and prohibitions—the elective franchise—rights emanating from the sentiments and affections—the rights of woman—the right of property and its moral relations—and, lastly, intellectual property. The subjects of Mr Combe's notes in the Appendix are—the right to preserve existence—the function of government—treatment of criminals—religious test of witnesses—offences against religion—Sunday—religious education—the enfranchisement of the clergy—national education—control



Having already presented, in our 10th, 16th, and 17th volumes, several of the essays collected in the present volume, it is unnecessary to give here any farther notice of Mr Hurlbut's work. To those who perused the former, our pages it is enough to say, that the others are of equal merit. On "the rights of woman" and "intemperance" the author is more than usually eloquent.

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III.—*The Education of the Body: An Address to the Working Classes.* By CHARLES BRAY. Second Edition. London: Evan and Lewis, 1847. 8vo, pp. 24.

The author of this address is a manufacturer and a well-known staple of Coventry. He has for more than twenty years devoted much of the energy, talent, and accomplished ordinary intellect, prompted by the kindest and most generous feelings, to the public good, and especially to the improvement of the mind, intellectual, moral, and physical, of his own countrymen in all, but particularly, the working classes. A practical and Sanitarian to our heart's content, he has been led to, and guided in, his benevolent labours by a conviction of the truth and practical value of Phrenology. In his position he is a person of great value; and in his occasional encounters with the shrine-makers and other lovers of things as they are,\*—for we must not deny a rare activity, energy, and moral courage, added to his industry—he has effected much good in his native town.

We owe an apology to the author for these remarks, and yet cannot resist the temptation to carry

his boyhood, which conveys so striking a phrenological lesson that we feel assured he will pardon our alluding to it, for an object so dear to himself—the public good. As a boy, he manifested all the violence and self-will of large destructiveness, combativeness, self-esteem, and firmness; and as education then, as it yet does, addressed itself chiefly to “tame” such a moral compound by violence and severity, that course was pursued in young Bray’s case, in utter ignorance that there existed impulses of a kindlier nature in his character. Corporal punishment, however, proved a game at which the pupil played as well as the master, and the latter came out of the duel considerably more damaged than the former. Dismissed as incorrigible from one school, the young rebel was sent to another; but as in no school of the time did there exist any other course than the violent, after maiming Squeers after Squeers, and leaving them in brown paper and vinegar, the victorious Nickleby was returned home finally declared to be possessed by seven devils, of which not one had been effectually whipped out. Had it been his lot, which was then no one’s, to be sent to a seminary founded on and conducted according to the “new-fangled” system, rebellion and kicking of shins would never have been heard of; on the contrary, the real moral and intellectual worth of the boy’s character would have come out in all its gentleness, attachment, and teachableness, to the effect of raising him, in all respects, to the head of the school. These higher qualities, then undreamt of, have now given him a station unsurpassed, if equalled, in his native town; while the elements of the “old Adam” in his composition perform their legitimate part in the “new man,” by furnishing activity, zeal, perseverance, and philanthropic valour, all in an eminent degree. We need scarcely add that he is too sound a philosopher to be other than a liberal, of the best quality, in his politics.

So much for the author. Of the pamphlet we have really nothing more to say than that it is in accordance with those views which, originating with our earliest phrenological masters, have now become common ground to all who write on phrenological principles. We therefore notice the treatise rather to advertise than analyze it. We would counsel the author to send a copy to the Mayor of every town in the kingdom, which functionary could not do a more important duty than order a large consignment of copies on the credit of the Corporation.

After an able exposition, or rather, salutary exposure, of the anti-sanitary abominations of Coventry, which at least entitle that ancient and classical town to a full equality in the honours of all the other as yet abominable towns in the

kingdom, the author proceeds to indoctrinate his townsmen how they ought to treat their bodies in all their functions so as best to preserve health and sound mind. In his section on the *SKIN*, the structure and functions of that tegument are clearly stated, and all the appliances for its scrupulous cleanliness explained and recommended. Under this head naturally comes the consideration of water, baths, and wash-houses. Then follows a practical statement of the laws of the *LUNGS*, leading to the subject of ventilation and sewerage, and all that tends to keep pure the air we breathe.\* *EXERCISE* follows, with the best means of securing this blessing to working men, and inducing them to make it their own. Next comes the chapter on the *STOMACH* and *DIGESTIVE POWERS*, connected with the health of the young, and the temperance of more advanced life. The *BRAIN* and *NERVOUS SYSTEM* the author treats concisely and well. We quote the following passage :—

Up to the present time the importance of the brain and nervous system has been very much underrated, even by medical men. All the other functions of the body are important only as they promote the healthy functions of these ; for it would be no use to us to live if we did not feel, and it is through the instrumentality of the brain that we feel and think. ... It is not the intention to represent brain and mind as the same thing, but it has been and is too much forgotten that here God has so closely united them, that in no case does one act without the other. For practical purposes, it requires always to be kept in view, that the state of the mind, and our capability of thinking and feeling, will always, as long as we live here, depend upon the state of the brain ; whatever, therefore, affects that, affects the mind also.

Here then the importance of all that has previously been stated becomes most apparent, and let no one say that *he* has never suffered any ill effects from neglecting the above laws of health. It is absolutely necessary for the health of the brain that it should be supplied with good and pure blood : if therefore the skin is neglected so that it cannot remove the waste matter from the blood ; if the blood is not properly oxygenized by a due supply of pure air to the lungs ; if it is not supplied with fresh nourishment from the stomach ; or if the heart does not circulate it vigorously enough, for want of exercise—the brain suffers, and the mind always suffers together with it. If therefore there are any who have not brought upon themselves positive bodily disease by their neglect of these rules, yet in all probability they have suffered in mind,

\* The author has, however, inadvertently fallen into an error in speaking of a fire in a bedroom being a dangerous source of impurity from the quantity of fixed air which it generates. No doubt a fire does generate fixed air, but it is carried in a heated state up the chimney, and does not vitiate the air of the room. On the contrary, it often improves ventilation by the more rapid renewal of the air. The real risk from a fire in a bed-room arises from overheating it if it be small, and from its frequently becoming the resort of gossipa or friends, whose presence, and not the fire itself, vitiates the air.



by *lowness* of spirits, hypochondria, nervous feelings, &c., or by the want of that mental energy and activity which they otherwise would have enjoyed, and of the positive feeling of happiness which always attends the proper and healthy action of all the functions of the body, and more particularly of the brain. Dr Andrew Combe quotes as the necessary consequence of the want of pure air, and therefore of imperfectly oxygenated blood going to the brain, "languor and inactivity of the mental and nervous functions, and a tendency to headache, syncope, or hysteria;" and he says that much observation has convinced him that this cause is "greatly more influential in the production of nervous disease and delicacy of constitution, than is commonly imagined."

Some judicious remarks follow on the danger of forcing the brains of precocious children—a practice which frequently, as in the touching case of little Paul Dombey, consigns them to early graves. The author adds a valuable chapter on NURSERY EDUCATION, chiefly quoted from Dr Caldwell, in which proper diet, clothing, temperature, air, and muscular exercise, for infants, are made as plain as the wife of a working man could desire. He concludes with warning his readers not to make light of his homely teachings, as many are apt to do, on such pleas as that they could not be troubled with such fidgetty attentions, they have done very well without them, and so forth—excuses which they may come to regret sooner than they are aware of; at least he advises that the principles inculcated should be taught to and practised by the young. "As we always find that we attend the best to those things to which we have been habituated in childhood, it is the duty of parents, who are more responsible for the health and happiness of their offspring than is generally allowed, to see that the *laws of health* form a part of the *daily duties* of children. By early and habitual attention to such laws, the term of life and all that makes life desirable may be very considerably extended, for sickness and *preventable causes of disease* now destroy much of the enjoyment that is within the reach of the working classes, even in their present circumstances."

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IV.—*Observations on Combe "on the Constitution of Man," principally in reference to Phrenology, and its merits as a science. With an Appendix, containing a brief review of the state of learning in ancient times, and a Chronological Table of Philosophers, Literati, &c., from the earliest period down to the eighteenth century of the Christian Era.* London: Simpkin, Marshall, & Co. 1847. 12mo, pp. 73.

Self-esteem has two distinct phases in its excess. Too often it is positively offensive in the form of pride, hauteur,



arrogance, insolence, and obtrusive self-sufficiency ; but not seldom it occurs in a negative and quiet form—a tranquil persuasion of his own merit and wisdom, which the individual never doubts or questions, but which leads him calmly to criticise, to direct, to legislate, to instruct, and to oraculate, quite unconscious of thereby presuming, or interfering with the common course of things. It is by no means necessary to this manifestation of self-complacency, that the effusions should excel in wisdom ; they are often characterised by stupidity and common-place, quite obvious to all but Sir Oracle himself. The author of the brochure before us, for example, no doubt thinks that it was reserved for him, after nearly twenty years, to settle the real merits of *The Constitution of Man*. It requires some patience to read the slipslop hap-hazard reasoning with which the author “sets matters straight” when distorted by some great fundamental principle stated by Mr Combe. What an imperfect idea should we form of *The Constitution of Man* had we nothing else than this commentary ! Single, and often very short sentences are quoted, like so many detached bricks pulled from a large building, and that building is to be judged of from such fragments. In many of these texts the very meaning of the author is mistaken by his wordy commentator. He is one of those who declare there is no use whatever in Phrenology, seeing that any truths to which it legitimately leads were all known before. Human nature, he avers, was perfectly understood by the ancients, by the Egyptians themselves, and by Moses who learned of them ; while to this knowledge Phrenology has added nothing whatever, and has only led to materialism. The very naming of this unexamined bugbear will to the better informed reader at once reveal to what humble class of philosophers the author belongs. The value of his *Observations* may be judged of from the following commencement. The italics are the author's.

“In preparing the succeeding remarks, it appeared best to examine the subjects under consideration, in accordance with the arguments of the writer in question, as contained in the following quotations ; comparing them with the principles of right reason and common experience.

“From page 1.—‘Intelligence, wisdom, benevolence, and power characterise the works of creation ; and the human mind ascends, by a chain of correct and rigid induction, to a great First Cause, in whom these qualities reside. *But hitherto this great truth has rather excited a barren, though sublime admiration, than led to beneficial practical results.*’

"The first part of this quotation presents to us a self-evident and sublime truth ; the second is not so clear, and will, I conceive, admit of great exceptions ; for, in the contemplation of that 'intelligence, wisdom, and goodness, as exhibited in the works of creation,' it cannot be denied that great and beneficial practical results have been *already* conferred upon mankind by the discoveries in astronomy, geography, natural history, botany, geology, mineralogy, chemistry, electricity, navigation, and many other sciences, which are yet progressing, and are evidently deduced from an intimate knowledge of the laws and arrangements of Nature we everywhere see around us in the universe, proclaiming the 'intelligence, wisdom, and power of a great First Cause.'"

Here is a profound misapprehension of Mr Combe's meaning in the short sentence commented on. So far from forgetting the great discoveries in science enumerated by his commentator, Mr Combe must have had them in his mind, as they must be in that of every reader of intelligence, as the very proofs afforded by "the works of creation," of the existence and attributes of Deity. This commentator inverts matters, and by the figure called *hysteron proteron*—freely translated from the Greek, the cart before the horse—concludes that a previous knowledge of the divine attributes led to the scientific discoveries. Mr Combe develops the meaning of his introductory position throughout his work, in a system of natural theology, in which he endeavours to establish clearer and more consistent views of the divine government of the world than had previously been promulgated.

We really lack patience to reply to the author's disjointed objections to Phrenology, having considered them, when urged by others, hundreds of times. The author, like others of his school, would limit and control natural science by his own interpretations of Scripture—which, philosophically speaking, is to fight with unlawful weapons, and, therefore, we beg to leave him in possession of the field. The appendix has curious and interesting matter in it, but not in our line.

Judicious friends, we think, would have counselled suppression of the *Observations* ; but the nothing-doubting self-esteem which we described in the outset, blandly whispered "Publish," and out the treatise came.

### III. INTELLIGENCE, &c.

*Lectures on Phrenology.*—In January and February, a course of eleven lectures was delivered in the *Liverpool Mechanics' Institution*, by Dr Hodgson, the Principal of that flourishing seminary. We learn from the *Liverpool Mercury* of 26th February, that, "In spite of the uncommon severity of the weather, a large audience collected every night to listen to his admirably lucid and philosophical exposition of this very interesting subject. These lectures were characterised by Dr Hodgson's well-known talent, an entire absence of effort, an ease of delivery, a clearness, an almost transparency, of language, and a felicitous choice of words which always pleases the ear and satisfies the judgment. The logical consecutiveness of the ideas was no less masterly. There was no attempt to astonish, or to take the understandings of his hearers by surprise; the doubtful or debateable points were clearly and candidly distinguished from those which are considered by phrenologists as established. The lectures were judiciously interspersed with suitable anecdotes and quotations, to illustrate the subject and relieve the monotony of didactic details. The objection to Phrenology, that it leads to materialism, was triumphantly refuted, the lecturer shewing that, far from throwing any new light on the subject, Phrenology leaves the question of materialism exactly where it was. To many, the most interesting parts of the lectures must have been the numerous applications to morals, the management of the young and of the insane, and the reclaiming of criminals. Indeed, we heartily wish that Dr Hodgson would take the hint so palpably given by the audience on the last evening of the course, and favour us with one or two supplementary lectures on the application of Phrenology to education, to the treatment of insane people, and to criminal jurisprudence. To conclude, there may be more brilliant lecturers, exhibiting more of what commonly passes for eloquence; but never did we listen to one who more completely possesses the true spirit of eloquence, a perfect adaptation of his language to the subject, a manner better calculated to win and fix, without straining, the attention of a large and mixed audience, whilst conveying deep instruction, and supplying matter for future thought." The popularity of Dr Hodgson's course is pretty well indicated by the fact, that the rival establishment, called the *Liverpool Collegiate Institution* (which is under the patronage and management of churchmen and conservatives, while the *Mechanics' Institution* is supported by the dissenters and liberals), forthwith engaged Mr Donovan, of London, to deliver six lectures on the same subject in February and March. "This," says the *Mercury*, "is a gratifying evidence of the power of truth to make its way in spite of opposition and neglect. Always excepting Christian precept and example, we know no better cure for bigotry and narrow-mindedness than the study of Phrenology affords." A report of Mr Donovan's opening lecture, in the *Liverpool Albion* of 1st March, says that, "although much of it was necessarily general and introductory, yet such is Mr Donovan's knowledge of his subject, and his happy mode of treating it, that it was rendered in the highest degree interesting, and appeared to be both clearly understood and highly appreciated by the audience." It "concluded with an able reply to the charges against Phrenology on the score of



materialism and fatalism." The last lecture of the course was delivered on 16th March.—Besides these lectures in Liverpool, the following have been delivered by Mr Donovan during the last six months :—Four lectures at the *Stratford Mechanics' Institution*, Essex, in October and November ; seven at the *Luton Mechanics' Institution* in November ; ten at the *Blackheath Mental Improvement Society* in December and January ; four at the *Arthur Street Mechanics' Institution*, Old Kent Road, *London*, in January and February ; two at the *Southwark Literary and Scientific Institution*, in December and March ; two of an unfinished course at the *Bexley Heath Literary and Scientific Institution*, in January ; and one at the *Finsbury Mechanics' Institution*, *London*, in November. Mr Donovan also opened classes for instruction in a systematized mode of manipulating the head and estimating developments and temperaments, at *Stratford Institution*, *Luton*, and *Blackheath*. These classes included, at the three Institutions, forty-one members ; two (at *Blackheath*) being medical practitioners.—In January and February, Mr S. Eadon delivered before the *Sheffield Phrenological Society*, four lectures on "the bearings of Phrenology, Mental Science, and Christianity." They are reported in several numbers of the *Sheffield Independent*, which records that, at the conclusion of the course, "Mr Bach moved a vote of thanks to the lecturer, for his four extraordinary lectures, which he described as the most able, sound, interesting, and intellectual, that the society had been favoured with. Mr Broadhead seconded the motion, which was carried by acclamation ; and the lecturer, in briefly acknowledging the compliment, thanked the audience for their untiring attention ; adding, that if he had succeeded in casting from the mind of one individual the false notions often entertained, he should feel himself amply rewarded."—In January, Mr E. T. Hicks delivered before the *Devon and Cornwall Natural History Society*, at *Devonport*, a course of lectures on Phrenology, "in which (says the *Plymouth Journal*) he dwelt upon the importance of the science as a guide in education. The attendance was but small, but the frequent plaudits of those present manifested how highly they esteemed the remarks of the lecturer." Shortly afterwards, he delivered a course of three lectures at the *Devonport Mechanics' Institution*.

*Discussions on Phrenology.*—On the evening of 10th February, Phrenology formed the subject of a debate in the *Edinburgh Hunterian Medical Society*. Dr Struthers, a lecturer on anatomy, assailed it and its advocates in contemptuous terms, his principal arguments being borrowed from Dr Carpenter. He was replied to, rather feebly, by Mr J. Boyd, a professional phrenologist, after whom several gentlemen spoke on both sides. We are informed that, on this occasion, about a hundred of the most intelligent students attending the university were present. At an adjourned meeting two papers were read, one in favour of Phrenology, and the other against it ; and several speeches on each side followed. We understand that no vote was taken on the question. On 20th March, Dr Struthers repeated his attack in a lecture on the *Physiology of the Brain*, delivered in the *Argyle Square School of Medicine*. The objections brought forward were again almost exclusively those of Dr Carpenter ; but the lecturer repeatedly informed his audience, that these were but a small fraction of the many conclusive arguments he could adduce against Phrenology. At the conclusion of the lecture he complacently remarked,



In following the same pseudo-authority you have also been led erroneously to suppose, that Dr Carpenter was allowed to read a paper on the Physiology of the Encephalon, in which he so far forgot what honesty required as to omit all mention of the name of Gall, without one amongst the audience being found to rise up and protest against the injustice; no mention of any such protest, nor of the phrenological discussion that followed it, being to be found in its pages. Your obedient servant,

T. S. PRIDEAUX.

SOUTHAMPTON, March 1, 1847.

[In the January Number of the *Zoist*, 473, Mr Prideaux says :—" At the Ethnological Section, after the reading of a paper by Dr Latham 'on the distribution of round and elongated crania,' by Prof. Retzius, I exhibited a cast from a skull (found on Portsdown Hill with flint celts and arrow-heads), as a fine specimen of unmixed celtic. During the discussion which ensued, Mr Ogilby, a member of the committee, observed that 'a marked difference was observable in the skulls discovered in ancient tumuli in Britain, according as they were found associated with iron, brass, or stone weapons, the former being the best developed in the forehead, and the latter the least, as might be expected from their barbarous condition.' On this latter remark, Mr Ogilby was immediately called to order by the chairman, Dr Latham, and reminded that Phrenology was a prohibited subject!" In the 7th article of the same No of the *Zoist*, Mr Prideaux has replied to Dr Carpenter.]

*A Clerical Estimate of Phrenology and Mesmerism.*—The Rev. Dr W. L. Alexander, minister of a Congregationalist Church in Edinburgh, in a Recommendatory Note prefixed by him to a lately published work entitled "The Mosaic Creation viewed in the Light of Modern Geology, by George Wight," delivers an opinion concerning Phrenology and Mesmerism which we here extract for the edification of our readers :—" The enemies of revelation delight to dwell upon and to magnify all apparent discrepancies between science and scripture, for the purpose of discrediting the divine claims of the latter. From every science that has offered, or seemed to offer, any opposition in its conclusions to the statements of the Bible, they have eagerly drawn their materials of assault; and in their unseemly zeal, they have even accepted the assistance of such inventions as Phrenology and Mesmerism, which can be entitled to the name of sciences upon no other principle than such as would justify a dreamer in ranking his castles in the air as part of his available property."

*Practical Phrenology.*—The following letter from Mr C. Donovan to the editor of the *Coventry Herald*, appeared in the number of that paper for 1st January 1847 :—" Sir,—In your paper of the 18th ult., there are some observations (in your notice of an article on Phrenology in the *British and Foreign Medical Review*), respecting the practice of Phrenology, as it is frequently applied, in estimating mental tendencies from the development of the brain of individuals, which seem to me to convey no small share of contempt for such a proceeding, as well as a most sweeping reprobation of all those who include this operation in their professional pursuit of the science of Phrenology. You admit, nevertheless,

that the practice of taking developments *may* be turned to advantage, and that 'a very correct *general* estimate of character may be thus arrived at,' if 'extreme caution' be exercised, and a due allowance made for certain difficulties. 'If this were done,' you add, 'and if there were not so many impudent quacks, presumptuous in proportion to their ignorance. Phrenology, we believe, would now hold a very different grade in public estimation.' Now, Sir, as I have visited Coventry three times within the last four years, as a public practitioner of Phrenology; and as I had, each time, a great deal of practice as a manipulator of heads, and as a teacher of practical Phrenology; and as my name must be well known in Coventry, in connection with the subject of Phrenology, as well as in Leamington, where I sojourned for three months, in 1844 and 1845, I beg leave to ask you thus openly, Must I consider myself as included by you in the class of practitioners of Phrenology to whom you have alluded? I am, &c. C. DONOVAN. 18 Strand, London, Dec. 22, 1846."—To this the editor subjoins the following note :—"Certainly we believe that no one can justly accuse Mr Donovan of ignorance, or of being an impudent quack. The impression he left both in Coventry and Leamington was favourable, both to his own talent and to the truth of Phrenology. The papers, however, that we have seen of his, as well as all that we have heard of predicating character from development alone, confirm us in our belief, that not more than a tolerably correct general estimate of character can be arrived at by such means. But this is much; and if all the difficulties that stand opposed to greater correctness were candidly admitted and explained, and the public taught not to expect more, we believe that Phrenology would be better served than by the assumption of too great accuracy. We know Mr Donovan to be a good practical phrenologist, and a clever manipulator; and his advice, particularly for educational purposes, may be most useful; but it is as a lecturer and teacher of Phrenology in classes, that he has rendered, and may render, most service to the science. We know that for his lectures he has received public addresses, and that he holds the highest testimonials from medical, clerical, and philosophical class pupils.—*Ed. C. H.*" If *peculiarly-shaped heads* be excepted,—that is, heads in which certain organs are remarkably large or small in proportion to the others,—we agree with the editor of the *Coventry Herald*, that "a tolerably correct general estimate of character" is all that can be derived from mere phrenological manipulation. Gall himself has written, "Jamais je n'ai prétendu distinguer des modifications peu prononcées des formes du crâne, ou de légères nuances du caractère."

*Relation of Phrenology to Metaphysics.*—SIR, I have for long been interested in metaphysical inquiries, and have often wished to possess some positive knowledge respecting the analysis or classification of the mental powers. With this object I have inquired into and studied the usual works on the subject, including the metaphysical portion of the phrenological publications. Now, Sir, I am not a believer in Phrenology; I have not examined the evidence upon which it rests scientifically; but I never doubted for a moment that if it were true, it would be of advantage to me in my studies, and that it would supply, to some extent, what I was in search of. I knew that much of what I read *could not* be cor-

rect, and that many things asserted to be unknown were sufficiently clear, *assuming the phrenological theory*. What, then, was my surprise on reading a paragraph from Mr Morell's work, quoted in your last number, to the effect that the advantages of Phrenology terminate in its *PHYSIOLOGICAL* researches. Why, the man who makes this statement, and who thus denies the bearing of Phrenology on any portion of metaphysics, is the very same man who, in another sentence, objects to a special propensity for the Love of Children; thus proving that his *metaphysical views must be changed or modified according as he believes in Phrenology!* For it is evident, that if it could be demonstrated to him that such special fundamental feeling does exist, he would have to believe what he now disbelieves; and that, consequently, Phrenology would have added to his metaphysical knowledge. I am, &c. Φ.

*Shakspeare's Bust*—"Furrows of Thought."—To THE EDITOR.—Sir,—In the 89th number of the Journal there is an extract from the *Athenæum*, January 17, 1846, which contains what I deem to be a phrenological fallacy, and which, though the extract be not written, for aught that appears, by a phrenologist, may seem to receive some sanction from the fact of its being inserted without correction in the Journal. The writer, Mr Bell, believes that he has discovered in the bust of Shakspeare, at Stratford-on-Avon, certain indications of its authenticity, "particularly in the markings about the eyes, and the wrinkles on the forehead, which last, though slight, are firmly shewn, and are irregular, and individual." "I confess," Mr Bell continues, "I had often wondered to see the forehead of the great bard, as usually represented, so free from the *furrows of thought*, and had almost doubted the faithfulness of such smoothness, for transverse markings had been in my observation, always, in some measure, the accompaniments of thought, and in the bust at Stratford, behold! they are clearly observable." Now, the observation, though specious, and in accordance with popular notions, I deem to be founded on erroneous assumptions, and at variance with sound phrenological doctrine. For what may properly be called "thought," as distinguished from care, anxiety, and painful recollections, has, so far as my observations have extended, the *contrary effect* to that attributed to it by Mr Bell. Thought consists in the exercise of the intellectual faculties; exercise strengthens these, and enlarges their organs; this enlargement acts upon the skull and its integuments, so as to *prevent* rather than *cause* "furrows of thought." Foreheads in which the most furrows are to be found, are those of the lymphatic, the uneducated, the lazy-minded, the *thoughtless*. Now, I presume that Shakspeare had a nervous temperament, with a fair share of *repose* from the lymphatic; and seeing that he died comparatively young, it is, in my humble opinion, likely that his was not a furrowed, but a smooth forehead, as is decided in the following lines of another bard, whose name may well be associated with that of his immortal brother Poet and Dramatist:—

"How vigorous then the athletic form of age!  
How clear its open and unwrinkled brow!  
Where neither avarice, cunning, pride, nor care,  
Had stamped the seal of grey deformity  
O'er all the mingling lineaments of time."—SHELLEY.



vate museum."—Mr J. Dennison of 12 Bold Street, Liverpool, informs us that he has met with many cases of a strong disposition to laugh and weep, in conjunction with a large development of the cerebral region marked "3" on the bust. He will be glad to shew some of the cases to any phrenologist. With respect to the organ named Wit, he says he has always found that persons who have it large are remarkable for "profound and comprehensive judgment—the power of embracing the whole principles involved in any subject, and are not liable to be led away by *ex parte* statements."—The *Oxford and Cambridge Review* for November 1846, after quoting from the *Phrenological Journal* Mr Hytche's account of the heads of boys of the lowest order in London, proceeds thus: "Without committing ourselves to all the dogmas of Phrenology, we cannot but attach both truth and importance to such opinions as these, borne out as they are by so many concurring testimonies of other and less dubious kinds. (P. 592, art. on The Ragged and their Reformation.) The same number contains a very fair review of Mr Noble's work on the Brain.—An American edition of Mr Sampson's work on *Criminal Jurisprudence considered in Relation to Cerebral Organization*, with notes and illustrations by E. W. Farnham, matron of Mount Pleasant State Prison, New York, has lately been published. We have not seen this edition, but, judging from the high character of Mrs Farnham (see *ante*, vol. xix., p. 199), we expect to find much sound and interesting matter in her notes.—About the middle of February a paper was read at the London Ethnological Society on and in favour of Dr Retzius's views as to the crania of the north of Europe. In the course of the discussion which followed, Mr Richard Cull introduced Phrenology, took exceptions to the Doctor's views, and directed attention to what phrenologists have done in Ethnology. All this was well received, though Dr Prichard occupied the chair. A notice of Dr Retzius's work "On the Form of the Skull of the natives of the North of Europe" will be found in the *British and Foreign Medical Review*, No. 36 (October 1844), p. 372.—Dr Renouard, in his *Histoire de la Médecine depuis son Origine jusqu'au XIV<sup>e</sup> Siècle* (Paris 1846), vol. i., p. 3, says:—"Two interesting branches have recently sprung from the majestic trunk of the science which treats of the physical nature of man. The first, which is named Orthopedy, teaches how to correct certain external deformities, whether accidental or congenital; the success which has followed it, and the extension it has acquired, already assign it a special place among the other departments of the medical art. The second branch is called Phrenology, a Greek word signifying literally a discourse on the mind, or on the faculties, of the soul. But the mind is here taken for the organ which more particularly serves for its manifestation [Not for the organ, but for the mental faculties which it manifests]. It is, then, of the organ of the mind, that is to say, the encephalon, that Phrenology treats. Those who have made a special study of that branch believe that the development of the faculties of the soul, or rather the manifestation of those faculties, depends on the size and form of certain parts of the encephalon. This size and form, and consequently the degree of development of the corresponding faculties, they hope even to determine by examination of the outside of the head. If ever the promises of Phrenology be realized, it will be able to furnish great assistance in the physical and moral education of man."



*Books received.*—The Zoist, Jan. 1847.—The British and Foreign Medical Review, Jan. 1847.—Remarks, Theoretical and Practical, on the Education of Idiots, and Children of Weak Intellect. By W. R. Scott, Ph. D. London: Hamilton, Adams, & Co. 12mo. pp. 46.—Report of the Annual Soiree of the Liverpool Mental Improvement Society, Jan. 1847.—Why ought the Punishment of Death to be abolished? By Anti-Gallows. London: Gilpin. 1846. 12mo, pp. 27.—An Essay on the Separate and Congregate Systems of Prison Discipline. By S. G. Howe. Boston, U.S.: Wm. D. Ticknor & Co. 1846. 8vo, pp. 90.—William Howitt and the People's Journal: an Appeal to the Press and the Public. By John Saunders. London, 1847.—William Howitt's Reply to Mr Saunders' Appeal. London, 1847.—A Journal of a Visit of Three Days to Skibbereen and its Neighbourhood. By Elihu Burritt. London: C. Gilpin. 8vo. pp. 15.—The Medical Times, weekly.

*Newspapers received.*—Coventry Herald, Dec. 25, Jan. 1, Feb. 5, March 19.—Theatrical Times, Dec. 23.—Sheffield Independent, Jan. 3, 30, Feb. 6, 13.—Plymouth Herald, Feb. 6.—Plymouth Journal, Jan. 28.—Liverpool Albion, March 1.—Douglas Jerrold's Weekly Newspaper, March 13.—The New Moon, Nos. 26, 27, 28.—The Morningside Mirror, Vol. ii., Nos. 3, 4, 5.

*To Correspondents.*—We invite "A quondam Old Subscriber" to send us an essay on the subject he suggests, and shall be happy to lend him the Italian pamphlet if he will mention through what channel it may reach him.—Our intended remarks on Dr Carpenter's article in the British and Foreign Medical Review are again unavoidably postponed.—Mr Hytche's paper on "Love of the Past" will appear in next number.—J. M. (Camberwell) is thanked for the two pamphlets.—The letter of "A Lady" has been received.—"♦" may probably obtain the American edition of Gall's work on the Functions of the Brain, from Messrs Goyder of Glasgow, or through Messrs Wiley and Putnam of London.—Mr Deville's phrenological collection is still unsold.

In our next Number Mr Combe will continue his "Remarks on National Education," in an article under the title of "The Relation between Science and Religion; or, The Order of Nature a Guide for Human Conduct." It will be published also separately as a pamphlet, which will probably appear before the Journal.

Communications for the Editor (prepaid) may be addressed to Mr ROBERT COX, 25 Rutland Street, Edinburgh. Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall, & Co., Stationers' Hall Court.—Articles intended for the next following Number must always be with the Editor *six weeks before the day of publication*. Communications for the section of "INTELLIGENCE," and also Advertisements, should be in hand at least a fortnight before the same day. Charges for Advertising:—Eight lines, 6s.; twelve lines, 7s. 6d.; every additional line, 6d.; half a page, 14s.; a whole page, 25s. Advertisements may be sent to the publishers in Edinburgh or London.

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NEW SERIES.—No. XXXIX.

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**I. MISCELLANEOUS PAPERS.**

I.—*On the Relation between Religion and Science.* By  
GEORGE COMBE.

The Reformation in the sixteenth century produced a powerful effect on the European mind. The miracles, precepts, and sublime devotional effusions of the Old and New Testaments, excited, with deep intensity, the religious sentiments of the people, introduced ardent discussions on temporal and eternal interests, and, unfortunately, led to furious and desolating wars. Freedom on earth, and salvation in heaven or perdition in hell, were the mighty topics which then engaged public attention.

In the beginning of the seventeenth century, a generation born and educated under these exciting influences, appeared upon the stage. The Reformation was then consummated, but the duty remained of acting it out in deeds. The new generation had read in the Books of the Old Testament of a people whose king was God; whose national councils were guided by omniscience, and whose enterprizes, whether in peace or war, were aided and accomplished by omnipotence employing means altogether apart from the ordinary course of nature. The New Testament presented records of a continued exercise of similar supernatural powers; and the great lesson taught in both seemed, to that generation, to be, that the power of God was exercised as a shield to protect, and an irresistible influence to lead to success and victory in secular affairs, *those who believed and worshipped aright*, who embraced cordially the doctrines revealed in the sacred volumes, who abjured all self-righteousness and self-reliance, and who threw themselves in perfect confidence and humility on Him as their King, protector, and avenger.

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expectations renewed from time to time whilst we waited upon God, to see which way He would manifest himself upon our appeals? And shall we, after all these our prayers, fastings, tears, expectations, and solemn appeals, call these bare 'events?' The Lord pity you."\*

While the people of that age entertained these views of the manner of God's agency in secular affairs, they were equally convinced of the supernatural agency of the devil, and with similar earnestness acted on this conviction. They ascribed to satanic influence on their minds their sins of unbelief, and carried their horror of it into practical effect by burning thousands of human beings as witches, for supposed compacts with the fiend. This belief lingered among the Scotch people a century later. In February 1743 the "Associate Presbytery" of the Secession Church passed an "Act for renewing the National Covenant;" and among other national sins which they confessed and vowed to renounce is mentioned, "The Repeal of the Penal Statutes against Witchcraft, contrary to the express laws of God, and for which a holy God may be provoked, in a way of righteous judgment, to leave those who are already ensnared to be hardened more and more, and to permit Satan to tempt and seduce others to the same wicked and dangerous snare."

These were the views of God's providence entertained by the religious men of the seventeenth century. Those who were not penetrated by a deep sentiment of religion acted then, as the same class does now, on the views of the order of nature with which their own experience and observation, aided by those of others, had supplied them. They did not trouble themselves by much inquiry whether this order was systematic or incidental, moral, or irrespective of morality; but acted as their views of expediency dictated at the moment. It is with the opinions of the religious and earnest men of that century that we are now principally engaged.

In commenting on that period, Thomas Carlyle observes, in his own quaint style, that "the nobility and gentry of England were then a very strange body of men. The English squire of the seventeenth century clearly appears to have believed in God, not as a figure of speech, but as a very fact, very awful to the heart of the English squire." He adds, "We have wandered far away from the ideas which guided us in that century, and, indeed, which had guided us in all preceding centuries; but of which that century was the ulti-

\* Letter XCVII., Cromwell to "The Governor of Edinburgh Castle," dated "Edinburgh, 12th September 1650." *Lib. cit.*, vol. ii., p. 65.



world was similar to that entertained by the Greeks and Romans. Homer's priests and heroes offered supplications to the gods for direct interference in favour of their schemes, and their prayers are represented to have been occasionally granted. Cromwell, and the men of his age, with more true and exalted conceptions of God, believed in His still administering the affairs of men, not by means of a regular order of causes and effects, but by direct exercises of special power.

I should say that in this condition of mind they were inspired by pure and exalted religious emotions, but misled by great errors in theology. There is a wide difference between religion and theology. Religion consists in the devotional emotions which spring up in the mind, on contemplating an object which we have been trained to reverence. "Theology," on the other hand, is used to designate the intellectual notions which we form concerning that object. Hence the untutored Indian, the Mahomedan, and the Hindoo, when they sincerely venerate and worship the objects which they have been taught to regard as divine, are *religious*; although their "theology" may be altogether erroneous. In like manner, the English Independents and Scotch Presbyterians of the first half of the seventeenth century, were earnestly and profoundly *religious*, although their theological ideas may appear to later generations to have been at variance with nature and truth.

It was, however, under the influence of such views of the course of providence as they entertained, that the existing standards of the Church of England, and of the Presbyterian Church of Scotland, were framed; and hence perhaps arose the very meagre recognition of God's providence in the course of nature, as a practical system of instruction for the guidance of human conduct, which characterises them.

After that age, however, the human understanding, by a profounder and more exact study of nature, obtained a different view of the course of providence in the administration of temporal affairs. Science revealed a system in which every object, animate and inanimate, appears to be endowed with peculiar qualities and agencies, which it preserves and exerts with undeviating regularity, as long as its circumstances continue unchanged; and in which each object is adapted, with exquisite wisdom and benevolence, to the others, and all to man. In the words of the Rev. Mr Sedgwick, science unfolded a fixed order of creation, so clear and intelligible that "we are justified in saying that, in the moral as in the physical world, God seems to govern by general laws."—"I am not now," says he, "contending for the doc-



special acts of supernatural power as a means in human affairs, and it has presented a systematic structure, which man may study, comprehend, and guide to his practical conduct. In point of fact, it has already partially taken the place of the thing physical, men now act more on the basis of the world's administration is conducted on the basis of the established order of nature, in which objects are presented to man for his study, are to some extent under the control of his will, and are wisely calculated to promote his instruction and enjoyment. Some in the same view in regard even to moral affairs, the modern man of science is well expressed in the following words:—"If there be a God of Providence, and if His will be manifested by laws operating both on the physical and moral world, *a violation of these laws be a violation of His will, and is attendant with inevitable misery.* Nothing can, in the opinion of the modern man, *be subordinate to those laws of Nature has thought fit to impress on his moral creation.*" Other clergymen also embrace this view. The Rev. Thomas Guthrie, in his late admirable work, "A Plea for Ragged Schools," observes, that, "It is a grave mistake, who forget that injury as ineffectual as flying in the face of a moral or mental law."

Notwithstanding, however, this partial revolutionary change in theological belief, the theology of the British nation has been permitted to retain the forms in which it was in vogue in olden time; and what has been the consequential order of providence is very meagrely taught in theology to their followers, as of divine authority.

short, the great secular interests of mankind,—now governed by special acts of supernatural power? Science answers that they are not. Are they, then, governed by any regular and comprehensible natural laws? If they are not, then is this world a theatre of anarchy, and consequently of atheism,—it is a world without the practical manifestation of a God. If, on the other hand, such laws exist, as science proclaims, they must be of divine institution, and worthy of all reverence; and I ask, In the standards of what church, from the pulpits of what sect, and in the schools of what denomination of Christians, are these laws taught to either the young or old as of divine authority, and as practical guides for conduct in this world's affairs? If we do not now live under a special supernatural government of the world, but under a government by natural laws; and if these laws are not studied, honoured, and obeyed, as God's laws; are we not actually a nation without a religion in harmony with the true order of Providence; and, therefore, without a religion adapted to practical purposes?

The answer will probably be made—that this argument is rank infidelity. But, with all deference, I reply that the denial of a regular, intelligible, wisely adapted, and divinely appointed order of nature, as a guide to human conduct in this world, is downright atheism; while the acknowledgment of the existence of such an order, accompanied by the nearly universal neglect of teaching and obeying its requirements, is true, practical, baneful infidelity, disrespectful to God, and injurious to the best interests of man. Let those, therefore, who judge us, take care that they be not judged; and let those who think that they stand, take heed lest they fall. The public mind is opening to such views as I am now unfolding; and they must in future be met by other arguments than cries of “irreligion,” and appeals to bigotry and passion.

The churches which have at all recognised the order of nature, have attached to it a lower character than truly belongs to it. They have treated science and secular knowledge chiefly as objects of curiosity and sources of gain; and have given to actions intelligently founded on them, the character of prudence. So humble has been their estimate of the importance of science, that they have not systematically called in the influence of the religious sentiments to hallow, elevate, and enforce the teachings of nature. In most of their schools the elucidation of the relations of science to human conduct is omitted altogether, and catechisms of human invention usurp its place.

Society, meantime, including the Calvinistic world itself, proceeds in its secular enterprises on the basis of natural science, so far as it has been able to discover it. If practical men send a ship to sea, they endeavour to render it stanch and strong, and to place in it an expert crew and an able commander, as conditions of safety, dictated by their conviction of the order of nature in flood and storm. If they are sick, they resort to a physician to restore them to health, according to the ordinary laws of organization. If they suffer famine from wet seasons, they drain their lands; and so forth. All these practices and observances are taught and enforced by men of science and the secular press, as measures of practical prudence; but few churches recognise the order of nature on which they are founded, as a becoming subject of religious instruction.

On the contrary, religious professors have too often made war upon science, on scientific teachers, and on the order of nature, from the days of Galileo to the present time; and many of them still adhere, as far as the reason and light of the public mind will permit them, to their old doctrine of an inherent disorder reigning in the natural world. That disorder does prevail is undeniable; but science proclaims that it is to a great extent owing to man's ignorance of his own nature, and of that of the external world, and to his neglect of their relations. Many theologians do not recognise such views, but proceed as if human affairs were, somehow or other, still, in our day, influenced by special manifestations of Divine power. Mr Plumptre is reported, in the *Times*, to have lately said, in his place in Parliament, while discussing the existing famine in Ireland through the failure of the potato crop, that "He did not mean to enter at large into the question where the guilt, which had drawn down upon them this tremendous dispensation, lay—whether that guilt lay with the people or the rulers; but he could not help expressing what he considered to be a well-founded opinion, that the rulers of this country had deeply offended, by some acts which they had recently placed on the statute-book, and which, in his belief, were calculated to bring down the Divine displeasure on the land; but into this he would not enter."

It is conjectured that this Honourable Gentleman had in view the grant to the Roman Catholic College of Maynooth, or the repeal of the corn-laws, as the "act" "which, in his opinion, was calculated to bring down the Divine displeasure on the land." Be the acts what they may, the speech implied that, in his opinion, sin in the people, or in their rulers,



had led to a special deflection of physical nature from the ordinary course, in order to produce a famine for the punishment of the offenders. In the olden time, eclipses were viewed as portentous announcements of Heaven's wrath against the sins of men; but the discovery of unswerving physical laws, by which the motions of the heavenly bodies are regulated, and in virtue of which eclipses occur, has expunged that superstition from the civilized mind. Nevertheless, the same blind love of the wonderful and mysterious, which led our ancestors to quail before a natural and normal obscuration of the sun, leads the unenlightened mind in our day to seek for the causes of agricultural blights in sin, instead of in physical conditions presented to our understandings, as problems to be solved by our own industry and ingenuity, and to be then turned to account in avoiding future evils. On the other hand, many educated laymen, and also a number of the more enlightened among the clergy, whose scientific studies have produced in their minds a conviction of the steadfastness of the course of physical nature, have sought for the cause of the failure of the potato crop in some physical condition (unconnected with sin) of the plant itself, of the earth, the air, or the electrical fluids; which, if discovered, might in their opinion, enable husbandmen in future years to avert the calamity: and they have declined to recognise fasts, humiliations, and prayers, as means adapted, according to their views of the course of Providence, to avert the recurrence of the evil. Indeed, these observances, inasmuch as they mislead the public mind, with respect to its causes, are regarded by such persons as positive evils.

The Archbishop of Dublin, in his "Address to the Clergy and other Members of the Established Church, on the use and abuse of the present occasion," (the famine in Ireland in 1846-47,) says—

"But advantage has been taken of the existing calamity to inculcate, with a view to the conversion of persons whom I believe to be in error, doctrines which I cannot but think utterly unsound and of dangerous tendency, by arguments which will not stand the test of calm and rational examination. There are some who represent the present famine (as indeed they did the cholera some years back) as a divine judgment sent for the punishment of what they designate as national sins; especially the degree of toleration and favour shewn to the members of the Church of Rome. Now this procedure, the attributing to such and such causes the supposed divine wrath, is likely, when those of a different creed from our own are thus addressed, to be, by some of them, rejected as profane presumption, and by others *retorted*. When once men begin to take upon them the office of inspired prophets, and to pronounce bold-





press. Among others, Douglas Jerrold, in his Weekly Newspaper of the 20th March, entertained his readers with grotesque representations of "the Fast-day at the Palace"—"in the fashionable world"—"in the House of Commons"—and "the Fast-day of the respectable man"—"of the middle classes"—and "of the destitute." His is not an infidel or irreligious newspaper, but one which has a wide circulation among the middle as well as the lower classes. No more effectual means could be devised by the wit of man to destroy all seriousness of religious feeling in the nation, and all sacredness in their views of the manifestations of God's providence, than proclamations ordering Fasts which provoke ridicule; and apparently they owe their existence to the errors of the Church, which, in this instance, is the instigator of the Government. It chooses to remain behind the age in its theology,—and to expose religion, the Queen's authority, and itself, to public derision. The famine in Ireland unquestionably proceeded from Divine appointment, and taught a most solemn and instructive practical lesson to all reflecting men; but it must be viewed in a different light, and different deductions must be made from it from those which appear in the proclamation, before it can be invested with that solemnity and sacredness which really characterise it.

The Fast-day sermons present a striking illustration of the confusion of ideas which prevails in the public mind regarding the course of Providence in temporal events. Science confirms the declaration of Scripture, that God maketh "his sun to shine upon the evil as upon the good," and gives no countenance to the notion, that vegetable substances prosper or suffer directly in their growth, in consequence of the moral qualities of the men in whose fields they grow. On the contrary, it proclaims that their condition and productiveness depend on the soil, the heat, the moisture, the electric influences to which they are subjected, the manure and the seed, and on the skill with which these are brought to co-operate in yielding a return. The moral qualities of their cultivators may lead them to attend to, or neglect, the proper administration of these natural causes of fertility, in so far as they are subject to human control, and, by this means, indirectly influence the productiveness of the ground; but there is no warrant in science for believing, that if all the natural conditions of fertility be present, a blight will nevertheless pass upon the crop because of the owner's general or particular sins; or, *vice versa*, that if these natural conditions be absent, God will nevertheless send a rich harvest

preachers acknowledged only a natural Providence; while many others spoke as if Providence, in its instances, observed the fixed relations of cause and effect, and, in others, set them all aside.

It is impossible that the public mind can advance and self-consistent practical principles of action in the world's affairs, while such conflicting views of religion, and the course of God's Providence, are put forth from the pulpit and the press; and it is equally impossible that the youthful mind can be trained to study, and obey the course of God's Providence, while it is treated with so little consideration by those who assume to themselves the character of the accredited expositors of the Divine Will.

The questions, then, whether there be an intelligible Providence of nature revealed to the human understanding, whether it should be taught to the young, and whether the sentiments should be trained to venerate and obey the Divine institution, are not barren speculations and dogmas and doctrines. They touch a highly important practical principle. While an impassable gulph separates the views of God's Providence, on which society and daily business acts, and the religious faith which it is to believe, the influence of the latter on social conduct necessarily be feeble and limited. It is a matter of great importance to have the principles of action and of belief brought into harmony. Nothing can retard the moral and social advancement of the people more thoroughly than a theology for churches and Sundays, and a widely different code of principles for everyday conduct; and yet this *must continue to be*, the case with all the Christian churches while they fail to recognise and to teach the

knowledge of that constitution and its adaptations, as the basis of their religious faith and practice in reference to this world; and train them to realize in their own minds and bodies, and in the society to which they belong, *the natural conditions* on which health, prosperity, purity, piety, and peace, depend. Until this change shall have been accomplished, religion will never exert its due influence over human affairs.

Thomas Carlyle, in treating of the opinions of the seventeenth century, observes, that "the Christian doctrines which then dwelt alive in every heart, have now in a manner died out of all hearts,—very mournful to behold; and *are not the guidance of this world any more.*" This is literally true in the sense in which I have explained the fact; but in most other respects it is erroneous. It is chiefly in regard to the continuation of the special supernatural agency of God in this world, that the belief of the seventeenth century has practically gone out. It has not been abandoned in direct terms; on the contrary, it is retained in the standards and instructions of the churches; and is embraced, or attempted to be embraced, in the minds of many individuals; but, in point of fact, it is no longer felt to be a reality by modern enlightened Christians.

"Nay, worse still," continues Mr Carlyle, "*the cant of them does yet dwell alive with us*; little doubting that it is cant." With the *ignorant*, it is *not* cant, but a sincere, although a sadly confused belief. The strong-minded and well-informed men who have abandoned the ancient faith, are *wrong* in supposing that it is cant in their weaker brethren. They are themselves to blame for not honestly disabusing them, and informing them that the belief of the seventeenth century was, in this particular, a mistake, and that it no longer constitutes a practical rule of action. Mr Carlyle proceeds, "*In which fatal intermediate state, the eternal sacredness of this universe itself, of this human life itself, has fallen dark to the most of us.*" This is literally true. The religious sentiments are not permitted practically to recognise God's administration in the ordinary course of nature, as of Divine authority for the guidance of human conduct. We really *are* in the intermediate state here described. The old belief *has* partially died away, and our churches scowl upon the new belief, which perhaps may help to restore "*the eternal sacredness of this universe itself, and of this human life itself.*"

In Germany, which led the way in the Reformation, the same truth has forced itself on the attention of religious men. Dr Tholuck, professor of theology in the university



of the regularity. The word does not designate *the efficient cause* of the action; yet many persons attach a meaning to the term, as if it implied causation. The cause of the regularity which we observe in the motions and reciprocal influences of matter, may be supposed to be either some quality inherent in the atoms, or certain powers and tendencies communicated to them by the Divine Mind, which adapts and impels them to all their modes of action. This last is the sense in which I understand the subject, and I coincide in the views expressed in an article in the *Edinburgh Review*,\* generally ascribed to the Rev. Mr Sedgwick.

"What know we," says he, "of the God of nature (we speak only of natural means), except through the faculties He has given us, rightly employed on the materials around us? In this we rise to a conception of material inorganic laws, in beautiful harmony and adjustment; and they suggest to us the conception of infinite power and wisdom. In like manner we rise to a conception of organic laws—of means (often almost purely mechanical, as they seem to us, and their organic functions well comprehended) adapted to an end—and that end the well-being of a creature endowed with sensation and volition. Thus we rise to a conception both of Divine Power and Divine Goodness; and we are constrained to believe, not merely that all material law is subordinate to His will, but that He has also (in the way He allows us to see His works) so exhibited the attributes of His will, as to shew himself to the mind of man as a personal and superintending God, concentrating His will on every atom of the universe."

I add that, in adopting Mr Sedgwick's phrase of "a personal God," I use the word "person," according to Locke's definition of it,—“a thinking, intelligent being, that has reason and reflection, and considers itself as itself, the same thinking thing in different times and places.” In this sense of the word, our faculties enable us to assign a personal character to the Deity, without presuming to form any opinions concerning His *form*, His *substance*, or His *mode of being*.

The key to the system of natural Providence appears to me to consist in a knowledge of the distinct agencies of nature and their results. Physical objects act in certain determinate modes, and produce certain invariable consequences; organic substances act in certain determinate modes, and produce also invariable effects; and each faculty of the mind, and function of the body, has its appointed constitution and mode of action, and it produces happiness or misery according as it is used or abused. General health, happiness, and prosperity, are the results of our habitually acting in confor-

\* Vol. lxxxii., p. 62, July 1845.

mity with the several ordinations of nature, each communicating its own pleasures or pains, independently of the others, but all being in harmony among themselves, and with the nature of man.

These views have now been submitted for twenty years to public consideration, in "The Constitution of Man," and more recently in my "Lectures on Moral Philosophy," to which I beg leave to refer. The Calvinistic press and pulpit have, at intervals, made war upon them; but the only plausible objection which I have seen stated to the general doctrine contained in them, is, that circumstances occasionally occur in which it is virtuous to set the physical and organic laws at defiance;—as when a man rushes into the water to rescue a drowning fellow-creature; or on a railroad-track, in order to remove from it a child or deaf or blind person, who, but for such assistance, would be smashed to pieces by an advancing train. The benevolent agents in such enterprizes occasionally lose their own lives, either saving, or not, those of the objects of their generous care; and it is argued that, in these instances, we applaud the self-devotion which set at nought the physical action of the waves and the train, and risked life to perform a disinterested act of humanity. But these cases afford no real exceptions to the doctrine which I have maintained, that even virtuous aims do not save us from the consequences of breaking the natural laws. A few explanations will, I hope, remove the difficulty apparently presented by these and similar instances. Unless the benevolent actors in these enterprizes are able successfully to encounter the waves and escape the train, there is little chance of their realizing their generous intentions or gaining the objects of their solicitude. Obedience to the physical laws until they succeed is indispensable, otherwise both they and their objects will perish, and the calamity will thereby be aggravated. If they save the object, but die themselves, there is no gain to society, but the contrary; the life lost is most probably more valuable than the one saved.

No man, therefore, is justifiable in leaping into the water even to rescue a fellow-creature, unless he be confident that, by his skill in swimming, or by mechanical aid at his command, he can comply with the physical law which regulates floatation. If he do go into the flood deliberately, and in the consciousness that he cannot comply with the conditions of that law, he commits suicide. If, under the impulse of generous emotion, he plunges into the water, miscalculating his power, and is overcome; although we may admire and applaud his humane intention, we must lament the mistake he

made in the estimate of his own ability. In the case of the railway train, if the generous adventurer, after removing his fellow-creature from the rail, is himself overtaken by the engine and killed ; while we give the tribute of our esteem to his humanity, we must regret his miscalculation. In no case is it possible to set the physical laws at defiance with impunity. Cases, such as those before alluded to, may occur, in which it may be justifiable to risk the sinister influence of a physical or organic law for the sake of a moral object of paramount importance ; but even in such instances we are bound to use every possible precaution and effort to obey those laws, because our success in attaining the object pursued will depend on the extent of our obedience. We cannot escape their influence, if we do infringe them, and, assuming that we save a fellow-creature, if we perish ourselves, we shall have only half attained our aim.

The objection to the doctrine of the natural laws, founded on these cases, appears to me to arise from a misunderstanding of the sense in which I use the word "punishment." The dictionary definition of *punishment* is "infliction imposed in vengeance of a crime ;" but this is not my meaning. The inflictions under *human laws* have no natural, and therefore no necessary, relation to the offence they punish. There is no natural relation, for example, between stealing and mounting the steps of a tread-mill. When, therefore, I am represented as teaching that, in these instances, the benevolent agent is "punished" with the loss of life, for acting under the impulse of his moral emotions, those who understand the word "punish" in the dictionary sense, are shocked, and reject the doctrine as unsound. But the difficulty disappears when the word is differently defined. By punishment, I mean the natural evil which follows the breach of each physical, organic, and moral law. I regard the natural consequence of the infraction, not only as inevitable, but as *pre-ordained by the Divine Mind*, for a purpose : That purpose appears to me to be to deter intelligent beings from infringing the laws instituted by God for their welfare, and to preserve order in the world. When people, in general, think of physical laws, they perceive the consequences which they produce to be natural and inevitable ; but they do not sufficiently reflect upon the *intentional pre-ordainment* of these consequences, as a warning or instruction to intelligent beings for the regulation of their conduct. It is the omission of this element that renders the knowledge of the natural laws, which is actually possessed, of so little use. The popular interpretations of Christianity have thrown the public mind so widely out of the track of God's natural



providence, that *His object or purpose* in this pre-ordination is rarely thought of; and the most flagrant, and even deliberate infractions of the natural laws, are spoken of as mere acts of imprudence, without the least notion that the infringer is contemning a rule deliberately framed for his guidance by Divine wisdom, and enforced by Divine power.

In considering *moral* actions, on the contrary, the public mind leaves out of view *the natural and inevitable*. Being accustomed to regard human punishment as arbitrary, and capable of abeyance or alteration, it views in the same light the inflictions asserted to take place under the natural moral law, and does not perceive *divine pre-ordination and purpose* in the natural consequences of all moral actions. The great object which I have had in view in "The Constitution of Man," is to shew that this notion is erroneous; and that there is a natural pre-ordained consequence, which man can neither alter nor evade, attached to the infringement of *every* natural law.

To express this idea correctly, a term is required, something between simple "consequence" and "punishment." The former fails to convey my idea in its totality, and the latter adds something to distort it. I find it difficult to discover an appropriate word; but hope that this explanation will render the idea itself comprehensible.\*

Believing, then, that this world is governed by physical, moral, and organic laws, appointed by Divine power and wisdom, and pre-ordained as guides to human conduct, I select from physiology an illustration of the practical application of this proposition.

Science enables us to discover that the Author of Nature has assigned a certain constitution, and certain functions, to the human lungs. The chief use of the lungs is to purify and vitalize the blood; and the blood is the grand fountain of nourishment to the bones, muscles, skin, nerves, and brain; in short, to the whole man. The organism of man is calculated to act for threescore years and ten, and during that period to afford enjoyment to the intelligent and sentient principle resident within it. But Divine Wisdom has appointed *certain conditions*, on the observance of which the organism will continue successfully to perform

\* The admirable expositions of Natural Theology by Paley, and in the Bridgewater Treatises and other similar works, have not been generally applied to practical purposes; and the reason may be found in their not recognising the distinct consequences attached to the breach of the several natural laws, as instituted, and pre-ordained to serve as guides to human conduct.



its functions, and on the infringement of which it will either become impaired or altogether cease to act. These conditions are, to a great extent, cognizable by the human intellect, and constitute *the terms* on which the boon of health and life is presented to man ; it being left in his option to accept and fulfil them, or to reject and infringe them, as he pleases : only, certain consequences are pre-ordained to follow each specific course of action ; and these he must abide by, whether he will or not. One of these conditions is, that he shall breathe the atmosphere in that state in which God has prepared it and adapted it to the lungs and blood. A combination of oxygen, nitrogen, and carbonic acid gas, in certain definite proportions, exists in the air, and is exquisitely adapted to our frame. A great increase or diminution of the proportions of any one of these, or the introduction of certain other gases, is fatal to health, and eventually to life itself.

Regardless, however, of this Divine arrangement, the inhabitants of Exeter, Liverpool, and many other towns, have, through ignorance and indolence, allowed the exhalations of decaying animal and vegetable matter to mingle with that compound atmosphere adapted by nature to their lungs and blood, and the consequence has been that many of them have suffered from disease, and prematurely died. On the 8th of December 1846, a public meeting was held at Exeter, "to consider the sanitary condition of that city." The Mayor was in the chair, and among the persons present were Viscount Ebrington, Sir J. Duckworth, M.P., Edwin Chadwick, Esq., Dr Southwood Smith, &c. A report was read by Mr Terrell, which "analysed the mortality of Exeter, and shewed that while the deaths in those parts of the city where there was good sewerage and an ample supply of water were from 1.83 to 1.93 per cent. (per annum), in other parts, where the drainage was deficient, the mortality was 5 to 7 per cent." Mr Chadwick observed, that in infancy, "life is more susceptible than at any other period—infants, as it were, live more on air." "Now what is the mortality at Exeter compared with Tiverton? I find that while one child out of every ten born at Tiverton dies within the year, and one-tenth is the average of the county,—one in five dies at Exeter. And then, after its escape of the first year's mortality, it has not gone through all its chances. I find, farther, that while, in Tiverton, *twenty-six* per cent. die under the age of five years, in Exeter no less than *forty-five* per cent. die under the age of five years."

When we trace these effects to their causes, is it not clear

that that purity of the atmosphere which, by the appointment of the Author of Nature, is necessary to the support of life, had been destroyed by foul exhalations ; that the human intellect was capable of discovering and removing the sources of that corruption ; and that it was a duty which the inhabitants of Exeter owed equally to God and to themselves, to apply the whole powers of their understandings and will to comply with the conditions of life ? Can there be a more becoming theme for the combined exercise of the intellect and religious sentiments than that which is presented by such occurrences as these, in which the voice of nature calls aloud on parents to save their children by yielding obedience to the Creator's laws ? Yet what occurs ? Mr Chadwick informs us. " Well," says he, " here, in this city, in one of the healthiest counties of the kingdom, with an admirable site, and with all favourable circumstances, you have an infantile mortality and slaughter that very nearly follows—very closely induced—upon the infantile slaughter of Spital-fields, &c."

The same gentleman mentioned that, " about three years ago, an epidemic raged in Glasgow, and there was scarcely a family, high or low, who escaped attacks from it. But at Glasgow they have an exceedingly well-appointed, well-ventilated prison ; and in that prison there was not a single case of epidemic ; and in consequence of the overcrowding of the hospitals, which killed some two thousand people, they took forty cases into the prison, and not one of them spread. In fact, there are so many classes of disease so completely within management, that medical men who have the care and custody of those who are in comparatively well-conditioned places, are in the habit of saying, in relation to cases in their private practice, ' Oh, if I had but that case in prison, I could save it.' Now, what has your mortality to do with that disease here in Exeter ? I find that in Tiverton, while 23 out of 10,000 of the population are swept off by epidemic diseases, in Exeter no less than 103 are killed."

Here, then, we see a man of science, whose understanding is enlightened by the study of chemistry and physiology, clearly unfolding to the people of Exeter certain relations established by the Author of Nature between the composition of the atmosphere and the human body, in consequence of the infringement of which thousands of their fellow-citizens have perished prematurely. Yet these infractions of the laws of nature were allowed to continue, year after year, under the eyes of the Bishop of Exeter, unheeded and unrestrained. Not only so ; but while his flock was thus

dying from causes that were discoverable and removable, his Lordship was warmly engaged in denouncing, as irreligious, the Irish system of National Education, because it proposed to teach, under the name of secular instruction, unmingled with the leaven of the Thirty-Nine Articles of the Church, a knowledge of these very institutions of the Creator, a due regard to which would have enabled the people to save their own lives and those of their children! I do not doubt that he and his clergy duly consoled the dying, read the burial-service over the bodies of the dead, and comforted the bereaved parents whose cherished offspring were thus prematurely snatched from them by the hand of death. But if these mournful effects followed, by God's appointment, from causes which were cognizable by human intelligence, and removable by human skill, why did they shrink from teaching the people to reverence this connection, and to avoid the evils, by acting on the lessons which it was reading to their understandings? This would have tended in some degree to restore the sacredness of this universe and that earnestness of the human mind, the disappearance of which religious men so grievously deplore.

So far from acting in this manner, these excellent and estimable persons not only treat the order of creation and its lessons with neglect themselves, but by their cries of "infidelity" deter other men, who see and reverence its *sacredness*, from appealing to the nobler faculties of the mind with full practical effect in its behalf. What a soul-stirring theme did not the facts now detailed offer to Mr Chadwick and his brother philanthropists, for an appeal to the sentiment of Veneration of the people of Exeter, to induce them to bring these evils to a close! But no: science, divorced from religion, dared not to trespass on such a field. Unfortunately, also, in the minds of the suffering members of the Bishop's flock, there was no adequate knowledge of science on which to found an appeal to their religious sentiments. The speakers, therefore, could urge only the humbler motives of economy and prudence.

"Now," says Mr Chadwick, "while, amidst this population of the Tiverton district (32,499), in Tiverton 610 die, no less than 920 die in Exeter. That makes an excess of deaths due to Exeter of 332 deaths in the year. The *expense of a funeral* is certainly not less than L.5 on the average. Taking it at L.5, *your expenses in funerals*, for the excess of funerals compared with Tiverton during the year,

are	.	.	.	.	.	.	L.1600	0	0
Carry forward,							L.1600	0	0



Brought forward,	L.1800	0	0
Every case of death involves at least 29 cases of sickness, which at L.7 per case, is an annual expense of	9285	0	0
Besides that, you have a loss of labour of four years and eleven months by premature death, as compared with Tiverton, which, on the excess of this year's mortality, makes a sum, supposing wages to be 7s. 6d. weekly per adult, on the average (and a very low average), of . . . . .	39,000	0	0
Making a total charge to this city of at least . . . . .	L.49,865	0	0

Say L.50,000 a-year. And that does not take into account anything for the loss of the maintenance of the children that have been swept away, nothing for the extensive amount of premature widowhood, for the large amount of orphanage, you will find burdening your charities."

This is a *truly English* argument, employed to induce a people suffering from gross infringements of the order of nature, to remove the causes of pestilence and death from their dwellings! I greatly err in my estimate of the mental faculties of Mr Chadwick, if he is not as deeply impressed with the "sacredness of this universe, and of this human life itself," as he is obviously alive to the emotions of benevolence; and if he would not have felt his power over his audience greatly increased, if he had found their understandings so far enlightened, that he could have ventured to appeal to their religious sentiments, in order to give weight and authority to his words. Not only, however, was the knowledge of nature wanting in them, but an appeal to it, in connection with the religious sentiments, might have been regarded by religious men as infidelity, while by some men of science it would probably have been ridiculed as "cant and a creed." Such is the predicament into which the teaching of the order of nature as a guide to human conduct under the sanction of the religious sentiments, has been brought by English education! No *safe* course was left to Mr Chadwick, but the one which he pursued, that of addressing the *lower faculties* of the people—their acquisitiveness and fear!

I do not question the force of the arguments addressed to these faculties; because nature is so arranged, that when we depart from her paths in one direction, we are liable to fall into a multitude of errors, each accompanied by its own peculiar evils. Pecuniary loss is one of the natural consequences of bad health; but the consideration of that infliction is not one of the highest, or most efficacious motives for rousing a well educated people to energetic action, to remove from their hearths the causes of disease and death.



I select another example from Scotland. A report of the mortality in Edinburgh and Leith for the year 1846, lately published, presents the following results :—

The mean age at death of the 1st class, composed of gentry and professional men, was	43½ years.
The mean age at death of the 2d class, merchants, master tradesmen, clerks, &c.,	36½ years.
The mean age at death of the 3d class, artizans, labourers, servants, &c.,	27½ years.

As I interpret this document, it is an intimation that these different classes have fulfilled, in widely different degrees, the *conditions* on which God proffered to continue with them the boon of life. We cannot imagine that He deals partially with men, and establishes one law for the rich and another for the poor: On the contrary, the structure of the various organs of the body on which life depends, is similar in all; and the elements of the atmosphere, the rays of light, and the winds of heaven, which affect these organs for good or evil, diffuse their appointed influences without the least respect of persons. To the circumstance, therefore, of obedience or disobedience to the organic laws, must these painfully different consequences be ascribed. Is it wrong to inquire into the nature of these conditions; to unfold them, when discovered, as valuable practical instruction to all these classes, and to appeal to their whole moral and religious sentiments to respect and observe them as Divine institutions, in order that the great gift of life may no longer be trampled by so many persons under foot?

I became desirous to learn how much of this instruction is communicated by the Established Church of Scotland, in their great normal seminary in Edinburgh, an institution in which several hundreds of children belonging to the third class of citizens are educated, and nearly one hundred teachers are instructed in the duties of their profession. It is partly supported by Government, and partly by the Church. On visiting the school, I was informed that physical science forms no part of the instruction given either to the pupils or to the student-teachers, unless a few chapters on natural philosophy and chemistry in one of their reading books, taught without apparatus and experiments, be entitled to that name. Nay, it was added, that lately Professor Johnston had voluntarily instructed the student-teachers attending the institution, in as much of the elements of practical chemistry as might have enabled them, when they became parish schoolmasters, to train their scholars in

the rural districts to the analysis of soils, by which means they might have learned to cultivate their gardens and their fields with an intelligent perception of the laws on which fertility depends; but that this instruction had not been followed up. It formed no part of the course of study prescribed by the Church; many of the teachers saw no particular value in it; and when the Professor ceased to attend, it was entirely abandoned.

As a contrast, I find the following statement in the "Twelfth Report of the Commissioners of National Education in Ireland for the year 1845:"—"We have adverted in former reports to the importance of agricultural instruction. We have now five Agricultural Model Schools in operation, and we have undertaken to make grants towards five more, which have not as yet been established. There are also seven of the ordinary National Schools which have land annexed to them, and afford agricultural instruction." This shews some degree of appreciation, in the Irish Commissioners, of the importance of teaching one department of the order of nature at least to the Irish children. They also report, that "the principle is, and has been from the beginning, that the National Schools shall be open alike to Christians of all denominations!" In their Tenth Report, they assure us, that "the tendency of the system is to produce peace, and that knowledge of men's true interests, the want of which is so likely to lead to disaffection and crime." This stands to reason; but, nevertheless, *their* system, which teaches nature without the leaven of the thirty-nine articles of the Church of England, has been stigmatized as "godless;" while that of the Church of Scotland, which omits nature and substitutes a catechism in its place, is admired as a bright example of sound religious education!

While schools under clerical guidance thus reject nature, the current in scientific channels runs in a different direction. Dr Symonds, physician to the Bristol Infirmary, in a letter published by him in the British and Foreign Medical Review for October 1846, remarks, that medical "*art*, after all, is but Nature in a new form—a *fresh arrangement of the forces of Nature, compelling them to work under new conditions.*" He adds, "I am not fond of arguments from final causes; but can it be doubted that the various medicines we possess, *mere, as such, a part of the plan of the universe designed to have a relation to morbid states of living organisms* as much as esculent matters to healthy conditions?" If this view be sound doctrine, which it certainly is, are not both of these adaptations fit subjects for the reverential exercise of our

religious sentiments, as well as for the investigation of our understandings? At present the public attention is much interested by the application of sulphuric ether to produce insensibility to pain during surgical operations. This application of it is still under trial; ; but should it ultimately prove beneficial, it will present another instance of the adaptation of physical elements to living organisms for benevolent ends.\* It baffles our comprehension why this discovery (if it shall prove advantageous) was not made sooner; unless, perhaps, we conjecture that He who endowed the ether and the organisms with their properties and relations, and bestowed on man faculties capable of discovering them, meant him to use these faculties for his own advantage, and that the long reign of suffering has been the consequence of infidelity to Nature and Nature's God. Men, in past ages, did not believe in nature as a system adapted by Divine Wisdom to the human constitution and presented to them for their guidance; and although physical science has forced, on well educated minds, a perception of the truth of this doctrine in regard to physical events, yet moral science is still so little understood that a too general scepticism prevails in regard to the moral government of the world by natural laws. According to my views, God does not send pestilences, earthquakes, or famines, to avenge this unbelief; but punishes each act of infidelity by pre-ordained deprivations of enjoyment, or pre-ordained evils which follow as the natural consequences of each act of omission or commission against His laws, whether physical, organic, or moral.

While science, as a practical guide to conduct, is thus excluded from the schools of the Church of Scotland, the Shorter Catechism is sedulously taught; and it presents the following view of the order of nature, and of man's relationship to it, for the instruction of the young:

"When God had created man, he entered into a covenant of life with him, upon condition of perfect obedience: forbidding him to eat of the tree of knowledge of good and evil, upon pain of death.

\* Professor Simpson of Edinburgh has applied sulphuric ether to produce insensibility to pain in cases of difficult labour, hitherto with success. While it extinguishes sensibility for the time, it does not impede the muscular contractions which accomplish child-birth, and, in consequence, he recommends it to be used in cases also of natural labour. The benevolence and wisdom implied in such a pre-arrangement as this, if experience confirm it, appear calculated to excite admiration and gratitude in every well-constituted mind; nevertheless, I have heard this application of sulphuric ether, assuming it to be successful, objected to, as being a profane attempt to abrogate the primeval curse pronounced upon woman!



"Our first parents, being left to the freedom of their own will, fell from the estate wherein they were created, by sinning against God.

"Sin is any want of conformity unto, or transgression of, the law of God." (This definition would include all the laws of God; but, nevertheless, orthodox authorities in general regard a want of conformity unto, or transgression of, the laws of physical and organic nature, as acts only of imprudence or indiscretion.)

"The sin whereby our first parents fell from the estate wherein they were created, was their eating the forbidden fruit.

"The covenant being made with Adam, not only for himself, but for his posterity, all mankind descending from him by ordinary generation, sinned in him, and fell with him in his first transgression.

"The fall brought mankind into an estate of sin and misery.

"The sinfulness of that estate whereunto man fell, consists in the guilt of Adam's first sin, the want of original righteousness, and the corruption of his whole nature, which is commonly called original sin; together with all actual transgressions which proceed from it.

"All mankind by their fall *lost communion with God, are under his wrath and curse, and so made liable to all miseries in this life, to death itself, and to the pains of hell for ever.*"

Here, probably, lies the grand obstacle to the blending of clerical with scientific instruction in education. Before the religious sentiments and the reflecting intellect of the people can be induced to reverence and obey the precepts of God addressed to them in the order of nature, they must be taught that nature is still such as God made it, and that it reflects wisdom and goodness in all its parts. *There can be no sacredness in nature, if it be intrinsically disordered and out of joint.* In studying it, we cannot come into communion with God, if through either its inherent derangement or our own natural obliquity of mind, His wisdom and goodness are *not* discernible in it; while if they *are* discernible, it cannot be justly said that man has lost communion with his Maker. If the divine adaptations in nature be calculated to raise and improve man as a moral, religious, and intellectual administrator of this world, he cannot be truly said to be under God's "wrath and curse."

Farther, if the teaching of the Old and New Testaments, in regard to human conduct in this world, depends, for its practical efficacy, on that teaching being in harmony with, and supported by, the order of nature,—then the foregoing representations of the physical and moral worlds, and their relations to each other and to God, are not only speculatively erroneous, but constitute positive and important impediments to the progress of Divine truth. They tend to blind the intellect, and mislead the moral and religious sentiments



of the people, and thereby to retard their advance in practical wisdom, religion, and virtue.

I select the next example from Scripture. In the sacred volume we are told "to do justly, to love mercy, and to walk humbly with our God," (that is, to obey His commandments). We are desired also to love our neighbours as ourselves, and to do unto them as we should wish that they should do unto us. Are these precepts *practical* in this world, or are they not? and what is implied in their being practical? Before they can become practical, it must be shewn that they are in harmony with, and supported by, the order of nature; that is to say, that nature is so constituted and arranged, that all the real interests of individuals and nations are compatible with each other, and that it is not necessary to rob and impoverish one to enrich another. Not only so, but that all injustice, oppression, and spoliation, being in opposition to the order of nature, must ultimately lead to evil and suffering to the perpetrator, or to those to whom he leaves the legacy of his spoils and his crimes. If such be the constitution of nature, then these precepts *are* practical. If, on the other hand, the order of providence admits of individuals and nations profiting by injustice and oppression, and reaching, and continuing to enjoy real prosperity and happiness through the systematic practice of crimes and violence, then are these precepts *not* practical in this world.

The history of all Christian nations shews that while they professed to believe in the Divine authority of the Scriptures, they were in a great measure sceptics as to their precepts being supported and enforced by the order of nature. In their practical conduct towards each other, they have too often set them at defiance; nay, each has striven to depress, spoil, and ruin its neighbour, as the most effectual means of raising itself to independence and prosperity. But not one of the nations has succeeded in attaining its ends by these means. The history of England's treatment of Ireland affords an instructive lesson on this topic.

Six centuries ago, in the reign of Henry the Second, England conquered the sister isle, and ever since has continued to sway her destinies. From the first day of her conquest to our own times, English statesmen have acted towards Ireland on principles diametrically opposed to the injunctions of the New Testament. They insulted the feelings of the Irish, placed shackles on their industry, shut them out from many of the most valuable rights of British subjects, placed the religion of the majority out of the pale of the constitution, prohibited its professors, under pain of banishment for

the first offence, and of death for the second, to act as school-masters or tutors in the instruction of their people; and when at last, in 1783, Ireland, in a moment of her strength, and of England's weakness, asserted her independence, and achieved a native legislature, English statesmen converted that legislature, by means of systematic corruption, into a new instrument of injustice and oppression: England pursued this course notoriously with the view of providing for her own safety, prosperity, and power! Has she succeeded? No. A calm survey of her history will shew that from the first day of her oppression to the present time, every injury inflicted on Ireland has recoiled on her own head; and that at this hour, Ireland is the source of her greatest weakness, anxiety, and suffering. She is paying eight millions sterling to save from starvation the victims of the system which she has pursued, and does not yet discern the end of the retribution which she has drawn upon her head.

During the whole period of this long crusade against the course of Providence and the precepts of Christianity, the rulers and people of England professed to believe in the Divine authority of the Scripture injunctions which they were trampling under foot; but they did not believe in their being supported by the order of nature. If they had believed in this, their conduct would have been as insane as that of men who should have sown corn in snow, and expected to reap a harvest from it in winter. Cromwell, and the religious men of his age, did not recognise the order of nature as supporting Christianity. On the contrary, they not only believed in a special supernatural providence, but when they were gratifying their own misguided passions, they complacently viewed themselves as the chosen instruments of God's vengeance for punishing His enemies. Statesmen who were not religious, either formed no deliberate opinion of any kind regarding the course of Providence on earth, or considered it as arbitrary or mysterious; not cognizable by man, and not available as a guide to human conduct. Indeed, the great majority of Christian statesmen and people, while they are disposed to acknowledge the existence of physical laws of nature, still disbelieve in the government of the world by *moral* laws. Lord Stanley lately presented, in a public document on convict treatment, a distinct expression of his conviction, that it is *not lawful* for man to adopt the order of nature as a guide to his conduct. Captain Macnochie had urged on his Lordship that "we cannot err in taking that model (viz. 'the discipline to which we are all subjected by Divine providence') for our guidance in our at-

tempts to elevate the characters of our guilty, but yet more unhappy brethren." To which his Lordship answered, "I do not understand that it is permitted to us thus to constitute ourselves imitators of the Divine government under which we live; or that, in this respect, the march of infinite wisdom is to be followed by beings of so contracted a range of knowledge and foresight as we are."<sup>\*</sup>

Lord Stanley and his predecessors certainly were not guilty of imitating the "march of infinite wisdom" in their convict management, but followed the counsels of their own will; and the result is now before the world. The transportation system is publicly acknowledged to have proved an utter failure, after costing hecatombs of human victims and millions of expense! It is, in future, to be abandoned. The men who saw and believed in an order of nature, predicted these issues from the beginning. Lord Bacon even denounced the natural consequences of the system as detrimental to humanity, and hundreds of voices have been raised against it from his age to ours. Nevertheless, statesmen, without inquiring into the causes of crime, the nature of criminals, or the adaptation of transportation to remove those causes and to improve that nature, proceeded in a course dictated by their own short-sighted preconceptions alone. The course of nature, however, could not be altered. Their measures were at variance with the pre-arranged adaptations of Providence; and nature triumphed, while they have recoiled, baffled and astonished. And this will ever be the case, until the "*sacredness* of this universe, and of this human life itself," be practically recognised by those who wield the destinies of nations, as well as by those who are subject to their sway.

Another example of unbelief in the action of a moral providence in nature is afforded by the author of a recent able and eloquent pamphlet—"The Case of Ireland stated, by Robert Holmes, Esq." After detailing the wrongs of Ireland, the author speaks of "moral force" as a means of her deliverance, in the following terms. "Moral force," says he, "is a power, by the mere operation of reason, to convince the understanding and satisfy the consciences of those on whom the effect is to be wrought, that there is some particular moral act, within their ability to perform, which ought to be performed, and which it is their duty to perform; and, also, by the operation of the same divine principle only, making

<sup>\*</sup> Parliamentary Paper on "Van Diemen's Land," ordered by the House of Commons to be printed, 9th February 1846, p. 11.



those free moral agents do the very thing required. The intended effect must be produced, and must be moral—the efficient cause must be moral, purely moral, unmixed, undiluted, by any mean or sordid views; reason, heavenly reason, applied with eloquence divine; no threat, no intimidation, no cold iron, no ‘vile guns,’ no ‘villanous saltpetre’ dugged out of the bowels of the harmless earth, nothing but the radiant illuminations of moral truth.”—(P. 96.)

Mr Holmes considers this as a mere “evaporation plan,” adopted as a safety-valve to Irish discontent. “It seemed,” says he, “to be considered by the expediency men of the day as a first-rate contrivance;” but he regards it as pure “fudge,” and seems to prefer “monster meetings,” and displays of physical force, which may be used in case of need, as better calculated to accomplish “repeal of the union,” and the redress of Ireland’s wrongs. But Ireland has frequently tried to right herself by means of “cold iron,” “vile guns,” and “villanous saltpetre,” and with what success her present condition shews.\* It is obvious that Mr Holmes does not comprehend the lessons contained in his own pamphlet, and is an unbeliever in the moral government of the world. He does not see that the advocates of justice to Ireland are backed not only by “the moral” but by the “physical force” of God’s providence, in virtue of which they are able to demonstrate to England, that every sordid act which she has committed against Ireland has redounded in evil to herself, and that the scheme of creation is so thoroughly moral, so skilfully combined, and so unbendingly enforced, that the wisdom of all her statesmen, the counsels of all her bishops, and the voices of her whole people, will not suffice to turn aside the stream of suffering which she has drawn, and will continue to draw, upon herself, from every fountain of injustice which she has opened, or may hereafter open, in Ireland. What are the disappointments to avarice, the humiliations of baffled bigotry, the incessant consciousness of

\* I am no advocate of the doctrine of non-resistance. Organs of Combative-ness and Destructiveness exist in man, and they have legitimate spheres of activity, one of which appears to be to repel, by physical force, aggression which we cannot overcome by moral means. Armed resistance is one of the natural checks to injustice; but it is liable to one great disadvantage. The contests of force are governed by the laws of force. The most numerous, best appointed, best disciplined, and most ably commanded army, will gain the victory, irrespective of the moral merits of the cause for which it fights. High moral motives animating it will, no doubt, add to its discipline, its patience, and its devotion, and thus indirectly contribute to success; but they will not, in any other respect, supply the place of the ordinary sinews of war. Nature, however, has other modes of arresting injustice; and violence should never be resorted to until all better means have been tried without success.



insecurity and weakness, and the lavish waste of treasure, which have followed from England's injustice to Ireland, but the sanctions of nature's moral laws, and the punishments which give reality and efficacy to the doctrine of "moral force?"

Mr Cobden and his coadjutors carried repeal of the corn laws by the use of moral force alone; but they understood its nature and sanctions; that is to say, they demonstrated to the religious public that free trade is implied in the Scripture precepts before quoted—to the moral public, that free trade is prescribed by the dictates of the sentiment of justice inherent in the human mind—to the merchant, manufacturer, and husbandman, that free trade is not only compatible with, and calculated to promote, their worldly interests, but that these cannot be permanently and systematically advanced by any other means. In short, they shewed that every attempt of every class to benefit itself by unjust monopolies and restrictions had ended in failure, and had been punished not only by defeating its own end, but by actually obstructing the attainment, through other and moral means, of the very objects which the monopolies were introduced to promote.

Unless all this be actually true, free trade cannot maintain itself even now when it is established; and it was the moral conviction that these views *are* true, that first inspired Mr Cobden with full confidence in the success of his agitation.

'The advocates of "moral force," therefore, who see a moral government of the world established and enforced by God, wield not only "reason, heavenly reason," as an instrument for attaining justice, but "threats" and "intimidation;"—not the threats of "cold iron" and "vile guns," which may be employed in support of oppression and wrong as successfully as in vindication of right, but "threats" of evil from a power which no human sagacity can baffle, and no might withstand. Yet if the threats *be* real, and if the fictions be as certain as fate, what a strange condition of mind must Christian men be in, when they imagine moral force to be a mere "evaporation plan," altogether unsupported, when not backed by "vile guns" and "villanous saltpetre!" Before, however, they can wield moral force with effect, they must be converted to a belief in the real, actual, and efficient government of the world by God's secular providence, and they must search for evidence of this government, and teach it to their countrymen. The creeds and confessions of churches must be revised and new-modelled into accordance with the order of nature, and the Christian

precepts must be allowed the benefit of nature's support to give efficacy to their injunctions.

If the liberal members of the European community who desire to accomplish moral, religious, and political reforms, could be convinced of the reality of the moral government of the world, and take up this doctrine as the basis of their operations, no political tyranny, and no erroneous creed, could withstand their assaults. While they rely on guns and bayonets as their means of resisting misrule, they stand at a disadvantage; for these are equally available to defend error as to maintain truth; but when, abjuring these, they shall employ their higher faculties in discovering and demonstrating the combination of causes and effects, by means of which that moral government is actually carried into effect, they will become conscious of a strength before which error in every form will ultimately succumb.

Mr Holmes' blindness to the moral order of creation is evinced by another proposal which he advocates. While he admits that, during all the period of England's oppression, Irishmen were, in general, so destitute of moral principle, patriotism, and mutual confidence, that England, at all times, found among them willing tools to perpetrate her deeds of injustice, and Ireland never (except for a few months in 1782) found in her own population moral, intellectual, and physical resources sufficient to oppose or arrest them,—he looks to repeal of the Union, and the delivery of Irish affairs into Irish hands, as the only panacea for her sufferings and her wrongs. But if the view which I am now expounding be not a dream, Ireland's wrongs will never be righted until her destinies are swayed by a moral and enlightened legislature; and whether this shall hold its sittings on the one side of St George's Channel or the other, will matter little to either country; for, as God's providence embraces both, and has rendered beneficence and justice the only road to permanent happiness and prosperity for either, that legislature will first redress her wrongs which shall first bow before the power of God, and enforce His laws as superior in wisdom and efficacy to any which their own selfishness and prejudices can substitute in their place.

The advocates of the inherent moral disorder of the world, however, will probably point to history and to the actual condition of the human race in every country of the globe, as affording demonstrative evidence that this supposed moral government is a dream. The past and present sufferings of mankind cannot be disputed; but I ask, In what age, and in what nation, have the religious instructors of the people been

being, it appears not to be inconsistent with this character to have constituted his mind and body and nature in harmony with each other, and to have left him, in the exercise of his discretion, to work out, to a considerable extent, his own weal or woe. The fact that he, through ignorance and the misapplication of his powers, has hitherto experienced much misery, affords no conclusive evidence, that by more extensive knowledge, and more strict obedience to the laws of his nature, he may not greatly improve his condition.

Assuming, then, for the present, that an order of nature, pre-ordained by God for the purpose of guiding human conduct, exists—that it is cognizable to a greater or less extent by the human understanding,—and that it is in harmony with, supports, and enforces, the practical precepts of Christianity,—I proceed to apply these assumptions to the subject of national education.

Science is an exposition of the order of Nature, and the order of nature is just another form of expression for the course of God's providence in the affairs of this world. The sciences of anatomy and physiology embrace systematic expositions of the course of providence in relation to health. Chemistry unfolds the course of providence in fertilizing our fields, and in placing the minute combinations of matter under our control as elements of utility and ornament. Natural philosophy describes the course of providence by which the stupendous universe of suns and worlds, stretching beyond the grasp even of our imaginations, is bound together and regulated; and unveils to us, through the microscope, the incomparable skill displayed in the structure of the minutest forms of animal and vegetable life. And, in the principles of mechanics, it teaches us the extent and the conditions under which God has enabled us to apply the motive powers of nature to our own advantage. Phrenology unfolds to us the course of providence by which the health and vigour of the mind is regulated in connection with the body. In every cerebral organ which it accurately describes, it presents an instructive lesson regarding the sphere of activity, the uses and abuses, of the concomitant mental power. The science of moral philosophy includes among its objects the exposition of the natural consequences attached by the Creator to the use and abuse of every faculty of the mind and function of the body. Natural religion, using all this instruction as its basis, aims at investing every portion of the course of providence with a sacred character. It commands us to study it as a record of precious practical wisdom; to revere it as the counsel of the Most High, addressed to our intelligence and adapted to



our wants ; and to obey it as an indispensable condition to our attaining truth, purity, and intellectual elevation, with their concomitant blessings of health, happiness, and prosperity on earth.

These are named as a mere specimen of the sciences and their subjects. I admit that they are very imperfect, and that in many of them much error may be mixed up with truth. But this does not affect the question now under consideration. In so far as they contain any truth, that truth is Divine wisdom, addressed to man for his instruction and guidance. It merits the attention of his intellect and the respect of his religious sentiments ; and therefore should be taught in schools.

In the standards of certain churches and sects there may be found a general and formal recognition of God's natural providence as a guide, more or less intelligible, to human conduct ; but, nevertheless, no church and no religious sect with which I am acquainted, has recognized the order of nature as the basis of the practical precepts which it teaches regarding secular conduct and duty ; and not one of them has expounded that order even as the ally and support of Christianity. Not only so ; but although they mention in general terms God's natural providence as a guide to human conduct, not one of them proceeds, in its formularies, to shew *how* natural providence acts, in producing good or evil to man. Science, as I have said, attempts to do this ; but many religious men denounce the teaching of science as "godless education." While they are thus nearly unanimous in practically rejecting the course of providence in nature as a source of instruction to the young, each places in their hands its own Catechism of doctrines, its Liturgy, its Confession of Faith, or its other articles of belief ; and with the most pertinacious assiduity labours to imprint these indelibly on the memory, and to imbed them in the affections of its pupils. Meanwhile many of the sects denounce the catechisms, liturgies, and confessions of certain others as unsound, unscriptural, and dangerous to the eternal welfare of the people. Here, then, is a record unquestionably Divine, in so far as we read it rightly, superseded and set aside for books of human compilation, denounced as unsound by large masses of the community.

The effect of this on education is described by Mr Horace Mann\* in the following words :—"After the particular at-

\* Report of an Educational Tour in Germany and Parts of Great Britain and Ireland, by Horace Mann, Esq., Secretary of the Board of Education, Massachusetts, U. S. With Preface and Notes, by W. B. Hoigson. London : Simpkin, Marshall, and Co. 1846.



tention which I gave to this subject (religious instruction) both in England and Scotland, I can say, without any exception, that, in those schools where religious creeds and forms of faith, and modes of worship, were directly taught, I found the common doctrines and injunctions of morality, and the meaning of the preceptive parts of the Gospel, to be much less taught and much less understood by the pupils, than in the same grade of schools, and by the same classes of pupils with us," in Massachusetts, where the teaching of all sectarian doctrines in common schools is prohibited by law. Is not this sacrificing Christianity itself at the shrine of Sectarianism?

The elements of which a sect is composed, are the points in which it differs from other sects, and its existence depends on the success and assiduity with which it infuses a knowledge of and reverence for these into the minds of the young. It represents them as subjects of the utmost importance to their temporal and eternal welfare. In the estimation of its zealous leaders, they greatly surpass in practical as well as religious importance, the order of nature. If any sect were to cease investing its points of difference with the highest reverence in the estimation of its pupils, and begin to magnify the truth and utility of the doctrines in which all are agreed, it would commit *felo de se*. Its dissolution and fusion into the general body of Christian believers would be inevitable and speedy. The more completely, therefore, the different sects obtain the command of education, the greater will be the obstacles to the introduction of the order of nature into schools.

The points in which all Christian sects are agreed *must* constitute the essential substance of Christianity; because it is on these that Christian men of all denominations act in the business and relations of life. Pious, honest, and benevolent men, abound in them all; and this common excellence must spring from a common source. The points on which they differ, although they form the life-blood and bonds of union of sects, cannot constitute Christianity; because if they did, the Christian religion would really have scarcely any practical form or substance. It would consist of abstract disquisitions, discernible only by microscopic eyes, and inapplicable to all beneficent ends. Who will say that the points of faith in which the Church of England differs from the Congregationalists, or the views of church government in which the Free Church differs from the Established Church of Scotland—or the Secession Church from the Free Church—or the Scotch Episcopalian Church from them all—are the essential elements of Christianity? And yet it is for the sake of main-

taining these distinctions from generation to generation, and of transmitting to the remotest posterity the bitter contentions which have so frequently vexed the spirits and alloyed the happiness of this age, that we are called on to exclude instruction in the course of nature, as a guide to human conduct, from our schools; to reject a system of education founded on the points in which all are agreed; and to prostrate the national mind beneath the car of sectarianism, and to allow it to be crushed into dust by its unhallowed wheels!

Practical Christianity, on the other hand, and the laws of nature, physical, organic, and moral, present the same instruction and recommend the same line of action to all, and are, therefore, destructive of sectarianism. Hence the deadly cry of infidelity which all sects raise against them! Obedience to them is calculated to bind man to man, and nation to nation, by the ties of reciprocal interest as well as of affection and duty, and to bring all into communion with God. Our knowledge of them grows with the growth of science, and their influence increases with the augmentation of the prosperity which obedience to their dictation yields.

Every motive of duty and interest, therefore, calls on the laity and the Legislature to disenfranchise education from the dominion of sects, and to allow to God's providence a fair field for working out its beneficial ends. Disguise the fact as we will, the order of nature—in other words, God's secular providence—is a power which in this world shapes our destinies for weal or woe; while the peculiar doctrines of sectarianism only exalt the consequence and power of clerical teachers, and the few zealous laymen who constitute their staff. To vote money, therefore, as is done by the Minutes of Council of August and December 1846, to every sect, to enable it to educate its own members in its own religious doctrines, is actually to endow discord. It is deserting the shrine of reason and of moral and religious principle, and bowing at that of prejudice and bigotry. It is renouncing all reverence for God's providence, as revealed in the course of nature; for every one of the sects, if it does not exclude, deny, and denounce the order of nature as a source of practical instruction to the young, at least practically treats it as a matter of small importance compared with its own peculiar dogmas. To give them the public money to enable them to pursue this course of instruction more effectually, is to encourage them in placing their own wisdom high above that of the Creator.

Truth alone can benefit a nation, yet the doctrines of every sect cannot possibly be true: to give each of them public

money, therefore, to teach its own tenets, is to endow equally truth and error. It is tantamount in physics to setting in motion antagonistic forces ; in cookery, it is like paying one man to pour wormwood and another sugar into the cup of which the nation is to drink. By all means allow the men who prefer wormwood to fill their own bowl with it ; and those who prefer sugar to fill theirs with sugar ; but let not the Government, which superintends the cup out of which all must drink, pay men with national money to destroy the contents of that cup, and render them a potion which no human palate can endure. To pay all sects, who are teaching solemn contradictions, implies an utter disbelief in any intelligible order of God's providence on earth. It deliberately supersedes the teaching of it, and plants conflicting catechisms, liturgies, and confessions, in its place. If the heads of the Government cannot discern in science an exposition of the order of nature, or, in other words, of the course of God's providence on earth, they may at least so far defer to Divine wisdom and intelligence, as to believe that God's providence, however dark, must be self-consistent, and that it does not promise to prosper contradictions !

Will not the men of intellect and science who see this to be the case assume courage, speak out, and help to stem the torrent of sectarianism which overflows the land ! They have it in their power at this moment to do their country an invaluable service, for which she would one day rear monuments of gratitude to their names. Will they, through fear of a little temporary obloquy, desert the standard of truth, of God, and of the people ! Let their own consciences answer the appeal, and let them act as their consciences dictate. Will no teachers arise, imbued with knowledge of the order of nature, as unfolded in science, and, with faith in its adaptation to the human faculties, communicate it, under the sanction of the religious sentiments, to the young, as a help to guide them through the thorny paths of life ? Yes ! Such teachers exist, and they lack only the countenance of the enlightened laity to follow the strong impulses of their affections and understandings, and accomplish this great improvement in secular instruction.

Moreover, under the sectarian system, not only is the advancing intelligence of the people shackled by the consecrated errors of the dark ages, but the most vigorous and profound thinkers among the clergy of all denominations are subdued and held in thralldom by their feebler brethren. The men of inferior endowments and intelligence take their stand on the accredited dogmas, which they cherish because



they are in accordance with their own narrow and prejudiced perceptions; and they resist every liberal idea and study that has the most remote appearance of conflicting with their own preconceived ideas. As they exert a great influence over a half-educated people, trained to regard their doctrines with holy reverence, the more powerful minds too generally retire from the field, and leave to them an undisputed sway.

The best interests of society suffer from this unhappy state of things; whereas if nature were taught, as the harmonious ally of Christianity, the men endowed with the profoundest intellects, and the purest and most elevated emotions, would lead the general mind, and we should constantly advance. In the present time, the leaders of the Calvinistic sects are strenuously exerting themselves to bring back the public sentiment to the opinions of the beginning of the seventeenth century; and if they do not succeed, it is science alone which prevents this consummation of their labours.

From the neglect of nature by the sects, and the paramount importance which they attach to their own peculiar doctrines, they languish when not excited by contention among themselves. Dr Candlish illustrated this fact lately, when he called on the Free Church to renew and proclaim its "testimony;" in other words, constantly to obtrude on public attention the peculiar views which distinguish it from all other sects. He assigned, as the motive for doing so, the danger of decay, with which it appears already to be threatened, from its distinctive characteristics being forgotten, seeing that its standards, doctrines, and discipline, are identical with those of the Established Church of Scotland. There is no perennial source of activity and progress in any doctrine that is not in harmony with and supported by the course of nature. A scheme, on the contrary, founded on the combined principles of Christianity and God's natural laws, will enjoy an inherent vitality, and a self-rectifying energy, that will cause it constantly to flourish and advance. It will in time root out sectarian errors, and unite all classes in the bonds of harmonious truth.

In advocating a non-sectarian system of national education, I do not propose to deliver over scholars and teachers to government officers, with power to mould their minds into whatever forms our rulers may prefer, as some advocates of sectarian instruction pretend. The United States of North America have set us a bright example in this enterprize. They have divided their country into convenient spaces, and designated them as school-districts. The existing law of Massachusetts (Revised Statutes, 1835, title x., chap. 23),

ordains that districts containing fifty families shall maintain one school—districts containing one hundred and fifty families shall provide two schools, and so forth,—“in which children shall be instructed in reading, writing, geography, arithmetic, and good behaviour, by teachers of competent ability and good morals.” Larger districts, again, are required to maintain a school, “in which the history of the United States, book-keeping, surveying, geometry, and algebra, shall be taught.” And if the locality shall contain four thousand inhabitants, the teacher shall—“in addition to all the branches above enumerated, be competent to instruct in the Latin and Greek languages, general history, rhetoric, and logic.” The law requires the inhabitants to raise money by taxing themselves for supporting these schools, and ordains them to appoint committees annually for managing them.\*

In regard to the question, What, in conformity with law, may be taught in these schools in the name of religion? the “constitution” of Massachusetts requires that all children shall be taught “the principles of piety, justice, and a sacred regard to truth, love to their country, humanity, and universal benevolence, sobriety, industry, and frugality, chastity, moderation, and temperance, and those other virtues which are the ornament of society, and the basis upon which a republican constitution is founded.” The “constitution” goes no farther in specifying what things may be taught; but by the laws of the State, the school committees are authorised to prescribe the books which shall be used in the schools, under the restriction (imposed by section 23d of the Revised Statutes)—that they “shall never direct to be purchased or used in any of the town schools any school-books which are calculated to favour the tenets of any particular sect of Christians.” This prohibition was *first* enacted in 1827; but in 1835, when the statutes were revised, it was retained and re-enacted by an almost unanimous vote in both branches of the Legislature, and was approved of by Samuel T. Armstrong, an orthodox gentleman, then acting as Governor of the State.

The Bible is allowed to be read in all, and is actually read in nearly all, the schools; and, of course, whatever it teaches is taught.

Farther, “Under the provisions of the constitution and

\* Farther details concerning the machinery by which the schools are managed, and the taxes levied, in Massachusetts, will be found in an article in the *Edinburgh Review* for July 1841, under the title of “Education in America.”

the Sabbath holy ; not to steal ; not to kill ; not to  
witness against neighbours ; not to covet. Nay,"  
Mr Mann, " I refer to that awe-inspiring descrip-  
tion of judgment in the 25th chapter of Matthew, and  
there is not a single *action* or *omission* there men-  
tioned which the righteous are to be rewarded and the  
wicked punished, that may not be taught, inculcated,  
and repeated, against, in all our schools. Such, also, I know  
is the opinion of the Board of Education. Are all these  
things everything else of a kindred character, which they  
contain, *non-essentials* in Christianity ? But per-  
haps you desire something more for the schools ? Perhaps you  
think only that these passages (quoted by an evangelical  
writer) should be read, but that certain articles of faith,  
doctrines, more or less in number, embodying those prin-  
ciples in a manner more acceptable to you than is found in the  
texts, should be taught with them ?" This is what is  
forbidden by the law.\*—(P. 12.)

Mr Mann continues—" I have now received more  
than a thousand reports from the school committees of the  
several towns (districts) in the state, detailing the con-  
ditions and wants of the schools. Probably a majority of them  
are written by clergymen. In these reports, no subject is  
more freely discussed than that of moral and religious  
instruction, and how far the latter might be carried out  
without trenching upon the rights of individuals ; and with  
few exceptions—less, therefore, than one in five hundred  
of the voice of these committees has been unanimous in  
opposition to our constitution and laws on the subject of religious  
instruction, as they now stand. Every one of these reports  
was accepted in open town meeting, and, therefore, has  
received the sanction of the town whence it came."



poor. The upper and middle, and better conditioned members of the lower classes, have sent, and will continue to send, their children to schools which meet their own approbation, and for which they are able to pay. It is only the poor who are the real objects of our present solicitude; and we have the choice only of one of three measures in regard to them. *First*, To leave them in their present ignorant condition; which nobody advocates. *Secondly*, To leave them to be scrambled for by the contending sects,\* who lie under no responsibility to perform the duty of educating them. Or, *thirdly*, To place their education under the protection of the Legislature, and of the general intelligence and philanthropy of the country. The last is the scheme which I prefer; and disguise it as they will, those who recommend the second, have at heart the interests of a sect more than those of the people.

Such a scheme as that which is now advocated, has everything to recommend it. It is the voluntary system preserving all its excellent elements, and freed from several serious imperfections. The benevolent and active members of every school district, naturally become the voluntary springs and managers of the whole educational machinery within it. They give life and vigour to its efforts, and control its every movement. They are enabled to do this with greatly increased effect, from the law placing funds at their disposal, arming them with official authority, and backing them by the moral influence of the *whole community*, instead of that of a single sect. Again, the exclusion of sectarian teaching operates most beneficially on the mind of every one who takes an interest in schools. It accustoms him to look on the points of faith and practice in which all Christian sects are agreed, instead of dwelling with concentrated attention on those which distinguish his sect from all others. And this promotes the growth of brotherly love and true religion. It leads the mind insensibly to perceive that Christianity consists rather in the points of faith

\* The Rev. Dr Alexander, in his speech delivered at a public meeting held in Edinburgh on 31st March 1847, to oppose the Minutes of Council Scheme, gave a graphic representation of this scramble, which was loudly cheered by his audience, consisting chiefly of Evangelical Dissenters. "There is," said he, "another thing which I do not like in this measure, which has not been dwelt upon this evening. It is this; that instead of giving us a scheme of national education which shall tend to merge our sectarian differences, and our sectarian prejudices, in our common interests, this measure is distinguished by nothing so much as being a contrivance, in my opinion, to deepen the animosity of sects, and to involve the country more than ever in all the fierce bitterness of sectarian strife."—"The consequence will be a continual striving amongst all the different sects to get hold of children, and to keep them in their schools when they are there; and, in short, to use all sorts of means in order to induce and tempt children to join one sect rather than another."

My 1850 REMARKS ON NATIONAL EDUCATION, I can shew that Government is not only entitled, but enable the people, by legislative aid, to organize wealth and intelligence for the establishment of a system of schools for universal instruction; and to add, that experience shews that legislative voluntary effort out and out in this good work has been left to voluntary effort for the education of the people from the foundation of her institutions, and what the result? Mr Horace Mann, in his Educational Reform, says: "England is the only one among the nations of Europe conspicuous for its civilization and resources, which has never had, any system for the education of the people. *And it is the country where, incomparably beyond all other, the greatest and most appalling social contrast exists; no comparison with the intelligence, wealth, and refinement of the higher classes, there is the most ignorant and crime among the lower!* Owing to the indolence and selfishness of their system, or their no-system, no country in which so little is effected, compared with the expenditure of means; and what is done only tends to separate the different classes of society more and more from each other."

In Prussia and the United States, on the other hand, the education of the people has been conducted by the aid of authority and aid. The proper way to judge of the different systems, is to select two nations corresponding degrees of ignorance, and inquire within each had attained to a certain degree of morality, industry, and industry. Now, it is a fact, which all historians will attest, that in the beginning of the present century the people (for it is to their condition that the contrast

in education has been allowed to do its best to elevate their condition, unawed by deopotism and uninterrupted by foreign invasion. The liberation of the Prussian peasant from slavery, and the introduction of the national system of education, dates from 1807, but the latter did not come into full operation till ten years afterwards. One generation, therefore, has not yet entirely passed away since it was introduced. In thirty years the Prussian system has put a soul under the ribs of death, called into existence a national, intelligent, and energetic spirit, destroyed one-half of the remaining power of the Church of Rome, and extorted by moral force, without revolution or shedding one drop of blood, institutions more or less free, from all the sovereigns of Germany, except Austria ! Can any one shew as much accomplished by the Voluntary principle in the same period, starting from the same zero of attainment in England ?

Mr Mann sums up his description of the English "no system," and of the Prussian scheme, in the following words:—"Arrange," says he, "the most highly civilized and conspicuous nations in Europe in their due order of precedence as it regards the education of their people, and the kingdoms of Prussia and Saxony, together with several of the western and south-western states of the German confederation, would undoubtedly stand pre-eminent, both in regard to the quantity and quality of instruction. After these come Holland and Scotland." "The whole Prussian system," continues Mr Mann, "impressed me with a deep sense of the vast difference in the amount of general attainment and talent devoted to the cause of popular education in that country, as compared with any other country or state I had ever seen."—(Page 146.)

There is a great difference between the influence of the voluntary principle when applied to the support of churches and of schools for the poor. The object of the church is to provide means for securing the eternal salvation of the contributor and his family—a most momentous consideration to every reflecting man. It involves the selfish principles of his nature as well as his affections and his sense of religious duty. The school for the poor, on the other hand, addresses chiefly his moral and religious sentiments, leaving his self-interest far in the rear. Experience shews that these emotions do not suffice to induce the rich to provide sufficiently for the physical wants of the poor, and, in consequence, Parliament has enacted poor-laws. How, then, should we rely on them for providing for a less clamant mental destitution ?

In supporting these views, I beg to be understood as leav-



ing the Scripture doctrines relating to eternity, altogether to clerical superintendence. The statements that the precepts of Christianity, in relation to human conduct in this world, are in harmony with, and supported by, the ordinary course of God's providence, and that they can never become practical until the reality of their being so is demonstrated to the understandings, and recommended to the moral and religious sentiments, of the people, can be objected to by those only who find a difficulty in reconciling their peculiar dogmas to such propositions. In the words of Archbishop Whately, "Revelation may be compared to a *telescope*, which brings within our view things beyond the reach of the naked eye; but which no more supersedes the use of eyes than revelation does the use of reason; and which, again, if it be a *good telescope*, does not distort or discolour such objects as do lie within the reach of unaided sight. Even so, Revelation, though going *beyond* what Reason could alone discover from a view of the created universe, will never *contradict* the perceived laws of that universe. A pretended revelation would be proved not to be a true one, if it were at *variance* with the laws by which the Maker of the universe governs it."—(*Essay on Christian Self-Denial*, and in other works).

The conclusions which I draw from what has been stated, are the following:—That, in the present condition of sectarian religion, the Government is not justified in endowing all sects to teach conflicting creeds and catechisms to the young:—That the order of nature is of Divine institution, and calculated to serve as a guide to human conduct; and therefore should be taught to the young in the form of secular instruction, and its authority and lessons should be enforced by an appeal to their moral and religious sentiments:—That the practical precepts of Christianity harmonize with and are supported by the order of nature, and should therefore be taught along with natural science; but that all doctrines on which religious sects differ (not being connected with nature) should be excluded from national schools, and left to be taught by the parents and clergy of each sect to the children of its own communion, at separate hours and in separate apartments: And, finally, that National Education should be supported by a rate levied on school districts, but that the administration of the fund and of the school should be committed to the rate-payers of the district under proper regulations to be enacted by Parliament, and under Government inspection.

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Two questions are considered in the preceding pages—

What is the state of practical religion in this country? and What is the remedy for its present condition? In regard to the first point, I beg to adduce the testimony of the North British Review for February 1847. In an article in that Number, generally ascribed to the Rev. Dr Chalmers, and bearing all the characteristics of his style, it is said that "As things stand at present, our creeds and confessions have become effete, and the Bible a dead letter; and that orthodoxy which was at one time the glory, by withering into the inert and lifeless, is now the shame and reproach of all our churches." (vol. vi., p. 326.) Again, "There must be a most deplorable want amongst us of 'the light shining before men,' when, instead of glorifying our cause, they (men like Thomas Carlyle) can speak, and with a truth the most humiliating, of our inert and unproductive orthodoxy."—P. 328.

This representation is even stronger than that which I have ventured to give of the same subject in the preceding pages; and it is some advantage to start with so distinct a recognition, and from so high an authority, of the "great fact," that the present state of practical religion in this country is not satisfactory. The remedy suggested in the Review is widely different from that which is here advocated; but the public are the legitimate judges of the merits of the several proposals.

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II.—*The Philosophy of Deduction considered in relation to the Intellectual Faculties of Man.* By Mr RICHARD CULL.

The organs named Comparison and Causality are classed together as those of the Reasoning or Reflecting faculties. The power of seizing resemblances is ascribed to Comparison, and that of tracing causes to Causality. Phrenologists differ in opinion on the special function of Comparison; while the precise step in tracing causation which is taken by Causality is yet to be pointed out. The sphere of action of these two faculties in the act of reasoning has not yet been described.

The organ of Colour is in relation to colour; that of Number to number; that of Verbal Language to language; and the Reflective organs to reflection or reasoning. What do we mean by REASONING? "L'essenza dell' uomo sta nella ragione," as the Italians say. Man is a reasoning animal. We all at times draw conclusions, we give reasons for our opinions and actions, we support our views by arguments, and we reply to arguments which are opposed to our own.

All these acts relate to one process of the mind—to that called Reasoning. What is this process? Can it be defined and described? Are there varieties of it? Some reasoning is conclusive, and satisfies the minds of those who examine it; while other reasoning is inconclusive, and does not satisfy the minds of those who examine it. What is the difference between conclusive and inconclusive reasoning? Can we point to any step in the process of the reasoning, and declare its inconclusiveness to depend on a violation of a known principle, as we can refer a blunder in language to the violation of a principle in grammar? We can. Aristotle has taught us how. By unfolding the process of reasoning, and giving names to the several parts and processes, he has exhibited the principles which must govern our reasoning in order to render it conclusive. He has shewn that on whatever subject we reason—*i. e.* make use of arguments, whether in investigation, in teaching, in supporting our own views, or in refuting those of an adversary—the process which takes place in the mind is one and the same in all cases. I shall endeavour briefly to state the process as unfolded by Aristotle, and examine it in relation to the faculties of the human mind. Aristotle's Logic has not been translated into the English language. I shall, therefore, refer the reader to Whately's Logic as the best English work on the subject, and as containing the most accurate exposition of Aristotle's views.

The mention of Aristotle, and of logic, sometimes excites a smile even in men of science, but it is only in those who are unacquainted with his works. An eminent living mathematician, speaking of the peculiar difficulties in apprehending the 5th book of Euclid, says :—" And yet this same book and the Logic of Aristotle are the two most unobjectionable and unassailable treatises which were ever written."\* It should be borne, too, in mind, that " the history of its (logic's) discovery, as far as the main principles of the science are concerned, properly commences and ends with Aristotle."† It should also be borne in mind that as a zoologist he is unsurpassed by Cuvier himself, as may be ascertained by comparing his work entitled *Περὶ Ζῴων Ἱστορίας* with Cuvier's *Règne Animal*. This has been done by Dr Kidd, in an appendix to his Bridgewater Treatise " On the adaptation of external nature to the physical condition of Man." Great accessions have been made to our zoological knowledge since the days

\* De Morgan's *Connexion of Number and Magnitude*, p. 1.

† Whately's *Logic*, 5th ed. Introduction, p. 8.



of Aristotle. America and Australia, with their peculiar zoologies, were unknown to Aristotle. Since the days of Aristotle, the circulation of the blood and the functions of the nervous system have been disclosed, and many other important discoveries have been made in both anatomy and physiology. The invention of the microscope, too, has given additional power to the moderns in their researches. It will be seen, however, that Aristotle's principles of classification of the animal kingdom are those adopted by Cuvier; and that Aristotle's classification is scarcely disturbed by Cuvier. Aristotle's other works evidence a mind unsurpassed in variety and precision of acquirement, and capacity for original research. And only about one-fourth part of Aristotle's writings have come down to us. Aristotle failed in physical science, because he was not an experimenter, and in physical science observation is effected chiefly by means of experiment. Experience and experiment are not convertible terms. The philosophy of an appeal to nature by experiment has been of slow growth, and is even now more praised than understood, as is evinced by the writings of several philosophers. The physiological experiments to ascertain cerebral function by ablation seem to indicate a misconception of the philosophy of experimental research.

The definitions, axioms, &c., of geometers, have been praised for their exactness and conciseness since the days of Euclid himself. We are familiar with those merits of geometry. The definitions, &c., of logicians are exact and concise also; but with their merits we are less familiar, and it is not the fashion to become familiar with them. Logic teaches the laws of deduction, the *when*, the *where*, and the *extent* to which, inferences may be deduced from data. Mr De Morgan has published a tract on logic as an introduction to the study of Euclid.\* And it appears to be a right procedure to explain at least so much of the philosophy of deduction, as is necessary to a right understanding of the principles by which geometrical truths are evolved from other geometrical truths (axioms), which contain them, before beginning the study of Euclid.

The prevalent erroneous opinions on the nature and objects of logic, may be traced to the great misapprehensions of

\* "This tract contains no more than the author has found, from experience, to be much wanted by students who are commencing with Euclid. . . . He has long regretted the neglect of logic, a science, the study of which would shew many of its opponents that the light esteem in which they hold it arises from those habits of inference which thrive best in its absence." Introductory note to "First Notions of Logic (preparatory to the study of Geometry), by Augustus De Morgan, of Trinity College, Cambridge, Professor of Mathematics in University College, London."

Aristotle's work is on the philosophy of D.  
Bacon's is on that of Induction.

Some men who object to the study of logic, tion to adopt its technical language when they matize an opponent's principles, or to convict reasoning. In such cases, the technical language is misapplied. Even the terms "logical" and "illogical" are frequently misapplied, and that too by writers on logic. The terms "logical" and "illogical" can be confined alone to methods of deduction, *i.e.*, of drawing conclusions from premises. We cannot affirm the principles or premises we reason to be logical or illogical. Premises and conclusions are logically or illogically deduced.

Writers on logic have sometimes failed to view the nature and objects of logic; some by saying confounding, metaphysics with logic, and applying logic to inappropriate subjects.† The study of logic and moral philosophy have often been in the hands of one person. It seems to be an understood principle at Edinburgh and Glasgow Universities, that the study of Logic is not to teach logic, but is to substitute the mental faculties. And Mr Combe, who was a candidate for the Chair of Logic in Edinburgh in 1836, apparently acting on the idea of such a principle, solicited the professorship, not on the ground that he could teach logic, but on his ability to teach the mind in teaching Phrenology.‡

\* There is an able note on this subject in the introductory note to De Morgan's Differential Calculus, p. 12.

† On the right application of Logic, see Whately's Dissertations on the Science of Reasoning, which forms book iv. of his Logic.

‡ Phrenological Journal, vol. x., p. 102, *et. seq.*, and p. 2. See also Jarline in his "Outlines of Philosophical Education," m.

Logic, like arithmetic, is an abstract science. Both sciences, however, may be concrete. In arithmetic, the numbers may be numbers of anything, as coins, measures, spaces, &c.; but whatever the things numbered may be, makes no difference in the processes of adding, subtracting, or otherwise working those numbers. And in logic, whatever may be the subject-matter on which we reason, whether morals, mathematics, religion, &c., makes no difference in the principles which regulate and control our deductions. Reasoning, in its strict and precise sense of drawing conclusions, is one and the same process on whatever subject it is employed. The terms "moral reasoning," "mathematical reasoning," &c., are inaccurate, as indicating different kinds of reasoning, while reasoning applied to morals, mathematics, &c., is what is meant to be said.\*

Again, there is no such thing as Syllogistic reasoning, as opposed to, or differing from, any other kind of reasoning. The truth is, that every accurate train of reasoning can be analysed and expressed in the analytical form. And when so expressed it consists of a series of syllogisms. Locke admits this.† A SYLLOGISM is an expression or formula of the analysed condition of the deduction and the premises, by means of which the connexion between the deduction and the premises is clearly exhibited, as in the subjoined example from Whately:

Every dispensation of Providence is beneficial.

Afflictions are dispensations of Providence.

Therefore: Afflictions are beneficial.

Logic is not concerned about the truth or falsehood of the premises. It is concerned alone with the conclusiveness of the deduction. The truth of the premises is a question, not of logic, but of morals, mathematics, or whatever other branch of knowledge the subject-matter of the argument belongs to. Further, the truth of the conclusion itself is not even a question of logic. The question of logic is,—Does the conclusion *follow* from the premises? Logic decides whether the conclusion is virtually contained in, and is rightly inferred from, the premises. And thus it secures us from any error which is not already asserted in the premises.

A syllogism consists of three PROPOSITIONS. Each proposition consists of two TERMS, which are united by a COPULA. The copula is always *is*, or *is not*, or some equivalent expression. The terms of a proposition are named the SUBJECT and the PREDICATE. All propositions are assertions

\* See an able note on this subject in Professor De Morgan's *Algebra*, p. 198.

† Locke's *Essay on the Understanding*, Book iv., chap. 17.



Logicians, like mathematicians, have adopted arbitrary symbols, by which they take a step in and by which the mind, unaffected by the substance of the argument, may, more searchingly, examine between the premises and the conclusion, and the sources of error.

Every A is B.

Every C is A.

Therefore : Every C is B.

The argument thus expressed by symbols is that of which the syllogism just quoted is a particular instance.

The analysis of a chain of reasoning will present a variety of syllogisms. These are classed in accordance with certain principles, but which it is not my purpose to cite. Arguments may be considered as consisting of two parts, viz. 1st, the PREMISES, whence the deduction proceeds, and which is named the DEDUCTION. In the syllogistic expression of an argument the deduction is placed last.

The great principle commonly known as *omni et nullo*, for which we are indebted to Aristotle, which, indeed, is the key-stone of his system, is "That whatever is predicated universally of any class of things, may be predicated in like manner of any thing comprehended in that class." This principle, compared to Euclid's axioms for self-evidence, has continual application in logic, as may be seen in the syllogism above quoted.

Every dispensation of Providence is

The truth of the premises belongs to religion and morality. The conclusiveness of the deduction is the sole question of logic. Admit the premises, and the deduction is inevitable; for, by the *dictum de omni et nullo*, the afflictions being contained within, or comprehended under, the dispensations of Providence, are a part of the *omni*, which is admitted to be beneficial. Logicians describe three operations of the mind to be concerned in argument; viz., 1st, SIMPLE APPREHENSION; 2d, JUDGMENT; and 3d, REASONING. Simple apprehension takes cognizance *seriatim* of the terms of a proposition. The judgment pronounces on the agreement or non-agreement of the terms. And reasoning is the act of proceeding from one judgment to another, founded on that one. I now proceed to examine those mental processes in relation to Phrenology.

In the proposition, "Gold is yellow," it is an act of simple apprehension to receive the term "gold," and another act of simple apprehension to receive the term "yellow," while it is an act of judgment to connect the terms in the affirmation that "gold is yellow." In this example, and indeed in the case of all physical objects, the act termed by logicians simple apprehension is perception, and is accomplished by the perceptive organs. The informed mind knows that the substance named gold is yellow, heavy, ductile, malleable, valuable, &c. When the mind perceives the word "gold," some of the qualities of gold occur to it as constituting the individuality gold. The qualities which occur are different in different minds. Its value occurs to one, its colour to another, its specific gravity to a third, and so on. In the above proposition the quality of colour is prominently brought before the mind, and is affirmed or predicated of gold. Now, what faculty of the mind AFFIRMS?

The several physical qualities of bodies are perceived by different faculties; thus, Colour perceives colours, Form perceives forms, &c. And each faculty remembers and judges its own perceptions. Thus, Form perceiving an object, judges, and affirms it to be a circle or square, as the case may be. Size judges and affirms it to be large or small; Weight judges and affirms it to be heavy or light; Colour, to be red or blue; and so on.

Those persons who are endowed with a defective organ of Colour, cannot rightly perceive colours. They cannot accurately judge of colours. They commit many errors in their affirmations of colour. Those with a defective organ of Size, commit errors in their affirmation of magnitudes. And so of the other perceptive organs. In the proposition "Gold is yellow," the organ of Colour judges, and affirms its judgment,





partments of knowledge. Thus it is in relation to the development of the knowing organs, that a man desires to possess, and has power to acquire, a knowledge of what is around him ; and when those organs are well developed, he is able to grasp the wide domain of knowledge of which science takes cognizance.

It is necessary to distinguish between the judgment which each perceptive faculty exercises on the objects in relation to that faculty, and that judgment which is considered to be of a higher character, and is named the philosophical judgment. And this judgment is manifested by the reasoning faculties.

Phrenologists have not yet determined the special function of the organ named Comparison. Gall's statements have been verified by subsequent observers, yet our knowledge of its function is very imperfect. According to Dr Gall's view, it is chiefly a rhetorical organ ; as he refers to it skill in the adoption of comparisons, examples, analogies, and parables, for the illustration of a subject. The talent of the popular preacher in comparing heavenly and spiritual things to the earthly and corporeal, he refers to this organ. Although our knowledge of this organ's function is imperfect, yet, as to the talent for making comparisons, we know, *1st*, That each perceptive faculty compares together the objects which it perceives, and these are similar objects : thus Colour compares colours, Form compares forms, &c. *2dly*, That the faculty named Comparison compares diverse objects, and seizes upon some resemblance ; as in that fine passage where a physical is compared with a moral effect :—

*Portia*.—"That light we see is burning in my hall.  
How far that little candle throws his beams !  
So shines a good deed in a naughty world."

*Merchant of Venice*, Act V., Scene 1.

Now, with this much positive knowledge, and leaving the special function undetermined, we possess the means of deciding the part which the faculty plays in logic. We may consider all propositions to consist, according to their subject-matter, of only two classes, viz.—*1st*, Judgments of similar things, as, "This blue is darker than that blue ;" and, *2d*, Judgments of diverse things, as, "Man is mortal." Judgments of similar things, as of colour, can be effected by the comparison-function of that organ which is in relation to those things. And the judgments of diverse things can be effected only by the organ named Comparison ; for none but that organ can seize resemblances of diverse objects, *e. g.*, as that between a physical and a moral effect.

tion, is felt by a given faculty. An intellectual cognizance of our consciousness, and judges of it. And that power Dr Spurzheim believes to be actuality.\*

That this is the rationale, whether it be or be not a faculty that observes and records our states of consciousness will be admitted from the subjoined considerations. 1st, That those endowed with small organs receive but feeble impressions of colour; they do not affirm colour, they neither affirm nor deny spontaneously. 2dly, That those endowed with small organs of intellect do not experience benevolent states of mind; but feeble impressions from benevolence-excite, and those impressions are unheeded; so that they neither affirm nor deny spontaneously of benevolence, such feeble manifestations of function occur when the development of the organs of the intellect is completed: and, 4thly, That each organ manifests its own energy in proportion to its relative size of head.

Each faculty of the mind is in relation to certain objects, mostly external to us. The intellectual faculty gives us knowledge; the affective endow us with feelings and emotions. And each faculty, either mediately or immediately, enables us to judge, and to affirm or express our opinions in propositions. These propositions are the basis of reasoning, *i. e.*, make deductions.

Mathematicians and logicians have ably classified these relations. MATHEMATICS treats of quantity, and the relationships of magnitude and number. LOGIC in mathematical science concern magnitudes and are Theorems, Problems, and Lemmas. A

applications. It even embraces mathematics, so far as pure reasoning, *i. e.* deduction, occurs in that science. The classification of propositions, therefore, by the logician, must comprise every kind of proposition in the vast circle of human knowledge. There are Affirmative, Negative, Universal, Particular, Categorical, Hypothetical, and other kinds of propositions, which for the present inquiry it is unnecessary either to recite or describe. It may occur to the reader, that mathematical problems are excluded from the logician's propositions. A problem is a question to be solved, and not a judgment expressed in words.

An ARGUMENT is an expression, in which, from something laid down and granted to be true, something else must be admitted also to be true—true of necessity, as a result or a consequence of the other truth which was granted. An argument stated at full length and in its regular form is named a SYLLOGISM. And the conclusiveness of an argument when so stated is manifest from the mere force of the expression, as in the subjoined syllogism.

Y is X.  
Z is Y.  
Therefore: Z is X.

In this argument, the conclusion that Z is X, is inevitable, whatever terms X, Y, and Z respectively stand for. And to this form all legitimate arguments may be brought.\*

In obtaining the conclusion that Z is X, what mental operation took place? It was found that the two terms Z and X agreed with one and the same third term Y, and therefore with each other. In obtaining the conclusion, then, that Z is X, we have been engaged in an act of comparison.

Take another kind of argument, one of a negative conclusion:—

Every true philosopher reckons virtue good in itself.  
No Epicurean reckons virtue good in itself.  
Therefore: No Epicurean is a true philosopher.

The formula of this argument of Cicero's against the Epicureans, is,

Every X is Y.  
No Z is Y.  
Therefore: No Z is X.

In this case one term agrees and another term disagrees with one and the same third term, so that they disagree with

\* Whately's *Logic*, book ii., chap. 3, sec. 1.



each other. In obtaining the conclusion, that no Z is X, we have also been engaged in an act of comparison.

If we extend our inquiries to the examination of all the methods of drawing inferences which logic teaches, we shall find that in the deduction of an inference, the mind is engaged in an act of comparison. The question arises, Is the comparison, by which the deduction is effected, made by the organ named Comparison, or can it be effected by any perceptive organ alone? To solve this question, let us construct an argument concerning colour, and express it in the syllogistic or regular form.

All these colours are dark colours.

Indigo blue is one of these colours.

Therefore: Indigo blue is a dark colour.

It may be supposed, since the organ of Colour compares colours, that the comparison of the major and minor terms with the middle can be effected by the organ of Colour. We may, however, remark, that, 1st, The organ of Colour perceives colours, as blue, red, green, &c., but it perceives not and knows nothing of the general term colour: 2dly, The comparison is not that of two colours, but of a colour with a general term: 3dly, The comparison is that of diverse things, which can be effected only by the organ named Comparison.

A wide induction will shew, that the mental operation of drawing a deduction, consists in the comparison of two different things with one and the same other thing; and ascertaining the resemblances or differences of the two things, by means of the points in which they resemble, or differ from, the thing with which both are compared.

Now, the only organ capable of comparing together the varied knowledge which is obtained by different organs is the organ named Comparison. And hence this organ takes the lead in the act of reasoning. Dr Gall has a remarkable passage on reasoning:—"Toutes les fois qu'un organe, ou une faculté fondamentale, compare et juge les rapports d'idées analogues et disparates, il y a comparaison, il y a jugement. Une suite de comparaisons et de jugemens constituent le raisonnement."\* The last sentence is a description of reasoning such as Aristotle himself might have written, and we have no evidence that Gall was acquainted with the science of logic.

A number of questions suggest themselves for solution, as,

\* Gall sur les Fonctions du Cerveau, tome vi., p. 406.

What is the special function of the organ named by Gall, *Esprit Métaphysique, Profondeur d'esprit, Metaphysischer-Tiefsinn*; and which Spurzheim named *Causality*? And, since the organ of Causality plays so subordinate a part in reasoning, what is its sphere of action in metaphysical inquiry? I do not intend to discuss those, or any other questions, in this paper. I have simply examined the philosophy of Deduction, commonly known as Aristotle's Logic, in relation to the human mind; and pointed out, I trust, with sufficient clearness, the scope of action of the several intellectual faculties in the process of reasoning.

III.—*On the Insufficiency of the Evidence on which some Physiologists attribute to the Cerebellum Functions related to certain Muscular Actions.* (Extracted from "The Brain and its Physiology, by DANIEL NOBLE, Member of the Royal College of Surgeons of England," pp. 21-29, and 249-263.)

As the cerebellum has been the favourite subject of vivisection,—presenting as it does the greatest facilities for operation, owing to its comparative detachment,—the mutilations which have been practised upon this structure are the most deserving of attention; and if their value be disproved, no importance can be attached to other lesions of the encephalon, for very obvious reasons.

Rolando, of Turin, in the early part of the present century, having, from consideration of the anatomy, been led to regard the cerebellum as in some way or another concerned in locomotion, proceeded to test the validity of his opinion by the following experiments.\* He removed, by successive efforts, as much of the cerebellum as he could from one side of a pig, and also of a sheep. But scarcely did the lesion extend beyond the trepanned side, than the animal *was struck with hemiplegia*, and it perished very soon *amidst convulsive spasms and hæmorrhage*. He cut the cerebellum, in one of the animals, in different ways; the animal *could no longer sustain itself upon its legs*, as if it were paralytic; after twenty-four hours, it died of convulsions. Rolando professes constantly to have observed, that a diminution of the move-

\* The account is detailed in a work by Rolando, on the Brain and Nervous System, published in 1809. The statements in the text are taken from Gall's "Sur les Fonctions du Cerveau," vol. vi., which contains extracts from a French translation of Rolando's work by M. Coster.

and fell on the corresponding side, without being able to make use of the right leg, or this leg the least movement. Finally, the *par* itself to the two sides. It is acknowledged, this fowl occasionally shook its wings, and its inferior extremity,—a result attributed either to the mobility of the muscular fibre, or to some remnant of the cerebellum.

Early in the year 1822, a report, drawn up by M. Cuvier, was presented to the Royal Academy of Sciences, on a memoir by M. Flourens, on the object the determination of the properties of the nervous system, and of the action of these, and of different parts of this system, in the motions called voluntary, or involuntary, motion and prehension. The following extract from the cutting and removal of the cerebellum, and its translation of M. Cuvier's report, as it occurs in a valuable work on the brain. The subject of experiment was a pigeon.

"During the ablation of the first slices, only a want of harmony in the movements was observed. After the removal of the middle slices, an almost general loss of the result. The animal, continuing to live, only executes abrupt and disorderly movements. The faculties of flying, walking, standing up, &c., are lost. When the cerebellum is removed, the faculty of regulated movements has entirely disappeared. When brought back, the creature could not get up; yet it did not give up; that threatened it; it heard noises, it endeavored to escape danger, and made many efforts to do so, in order to accomplish its object. In a few words, it retained



an account of his proceedings in a pamphlet, in which the results are stated in the following terms :—" Mutilations of the cerebellum *were not accompanied by paralysis, or convulsions, properly so called, but merely by disorder of the locomotive functions; the faculties of equilibrium and progression were destroyed.* The animals mutilated were still capable of reflection, of hearing, of *moving their limbs in all directions,* and most frequently these movements were executed with extraordinary quickness and violence.

\* \* \* "When the cerebellum is totally disorganised, or entirely removed, the animal is for ever deprived of the faculty of equilibration, of walking, and of flying, if a bird: all the efforts it makes are useless; they merely demonstrate, that though unable to perform any combined motions, out of which station or locomotion results, it nevertheless retains the faculty of executing partial movements, and of moving its limbs in all directions.\*"

Magendie, who practised also these mutilations, states that, if a wound be inflicted on the cerebellum, the animal seems *compelled by an inward force to a retrograde movement,* although making an effort to advance; and that if the *crus cerebelli* on one side be injured, the animal is caused to roll over towards the same side. Sometimes the animals made sixty revolutions in a minute, and continued this movement for a week without cessation. Division of the second *crus cerebelli* restored the equilibrium.†

Magendie, moreover, states, in his work on Physiology, that he has seen, and has demonstrated to others a great many times, in his course of lectures, animals deprived of cerebellum, and which, nevertheless, *executed very regular movements.*‡

The following quotation furnishes an account of further experiments on the living cerebellum, practised by M. Fodera, in presence of Gall, Dannecy, Fossati, Londe, and Georget; the results are given by Gall, in the subjoined statement :—

"The first two rabbits from which the central and superior parts of the cerebellum were removed, died in three or four minutes. The hæmorrhage, as well as the *convulsions,* were considerable. The section was made from below, upwards. In one of them, the *medulla oblongata* was reached by the instrument, and tetanic convulsions were the results."

"The same operation was performed on a third rabbit. It

\* Solly on the Brain, p. 314.

† Vide Carpenter's Human Physiology, 2d edit., p. 217.

‡ Milligan's Translation, 4th edit., p. 183.

preceding rabbit, drew its head strongly back  
*sometimes forward* and sometimes backward."

Here, then, we see the results of mutilating  
lar division of the encephalon which furnishes  
facilities of all for its separate lesion. The var-  
tridictory character of the effects obtained, w-  
ciated at a glance by referring to the sentence  
going extracts, which have here been rendered i-  
lando found the vivisection in question to induc-  
and paralysis; Flourens gained by his proceed-  
harmony in the action of voluntary muscles; Bo-  
jects sustained no paralysis, but a destructio-  
powers of maintaining equilibrium and of prog-  
retention of muscular mobility in any directio-  
obtained an invincible disposition to retrograd-  
stating that his animals, after loss of the cere-  
yet execute very regular combined movements  
Fodera's mutilations were followed, in some  
convulsions and death, in others, by kicking and  
by movements *progressive* as well as retrograd-

It will thus be seen, that no two of the ab-  
presented anything like coincidence in the rest-  
on the contrary, direct contradictions occur.  
ralysis is met by Bouillaud's no paralysis; F-  
*lity to regulate* movement, is counterpoised by  
*capability*, confirmed by Fodera's experience;  
contradiction is seen throughout the entire h-  
vivisections; there is no single fact recorded  
tor, which is not counteracted in its tendency  
sion, by the experience of some of the others.

Diverse as are the statements regarding the

of the voluntary movements, and the *balancer*; Bouillaud maintained that it balanced the body only in station and progression; and Magendie concluded its office to be the source merely of movements forward. Gall, who carefully watched the repetition of these experiments, drew no positive inference from the results which he witnessed, observing, that "they will always be found to differ according to the irritability and the age of the creature, and according as the instrument is blunt or sharp, so that it pulls more than it cuts."

The experiments performed on the cerebellum have received from many individuals an amount of attention and consideration which, it is conceived, can have arisen only from a total disregard, or forgetfulness, of their true history.

Those of Flourens, in particular, are perpetually appealed to, as if they furnished results uniformly to be obtained; whilst those of the other vivisectors receive but little notice, and that only in so far as they are supposed to coincide with those of Flourens. The great name of Cuvier, always mixed up with them, has probably supplied the reason of this pre-eminence. It is yet remarkable that physiologists, commenting on mutilations of the cerebellum, and assuming the effects narrated in Cuvier's report, to constitute the normal consequences, so to speak, do but rarely agree with Flourens as to their doctrinal value; scarcely any two deducing identical conclusions from the same premises.

M. Foville,\* admitting the facts adduced, thinks they confirm his own notion, that the cerebellum is the central organ of sensibility. "The opinion advanced," says he, "that the cerebellum is the regulator of the voluntary movements, if we attentively consider the reasoning on which it rests, seems to me to strengthen the idea which places the central seat of sensibility in the cerebellum. After having injured the structure of the cerebellum extensively, we have observed that animals preserved the power of moving their limbs, but had lost that of co-ordinating the movements of these in a manner convenient to station, progression, flight, &c. But when we *will* to perform, and actually perform, certain movements, do we not distinctly feel that we execute them? The man who, with his eyes shut, moves his hand or his arm, does he not also as distinctly feel that he moves these parts, as if he followed them with his eyes? whilst the paralysed man who, with his eyes shut, is desired to move the paralysed limbs, may be very willing to do so, though incapable, and perfectly aware of his incapability of obeying; nor would it be possible

\* Diction. de Med. Pratique, Art. ENCEPHALE, p. 204. Quoted by Solly.



feel the ground upon which it stands, if it is in position in which its limbs are placed? In conversing with Sir Astley Cooper on this subject at the end of the year 1830. Sir Astley cited to me a man completely deprived of the faculty of sensation in the hand, the muscular power of which was preserved. When this man was desired to take up or lift anything, he did so very well; but if, while he was so occupied, his attention was taken away from the object, his contractions of the limb commenced, and the object fell to the ground; as soon as the patient followed the contraction of his fingers with his eyes, he remained to inform him that he held the object, of course, it escaped from his grasp."

"This, and other cases of a similar description, are conclusive as to the fact of sensation being the true basis of the muscular motions; it is by means of sensation that we are aware of the mode or degree of action of our muscles, that we have the power of co-ordinating their action in a suitable manner, and of executing a succession of voluntary movements in harmony with one another. If the power of perceiving the movements being lost, we cannot expect their precision or duration."

Such is the reasoning which Foville employed in support of the essential office which Flourens and his followers attach to the cerebellum, as revealed by its removal. It is hereby seen that, whilst Foville treats the functions of the cerebellum as if they were invariable, and matters of course (as has just been shewn that they are not), he yet relies on facts to be unwarranted by the facts of the case.

Dr Bostock states, that Desmoulins disa-

should be inclined to draw an inference precisely the reverse of that which has been formed by the author."\*

Dr Alison, suggesting his own explanation, remarks, with regard to the effects induced by the mutilation, "This may be supposed to be, either because the injury produces certain permanent uneasy feelings, such as vertigo, which interfere with and confuse the sensations, by which the voluntary movements are regulated; or because the recollection of muscular sensations, which are the guide to all definite voluntary movements, depends upon the cerebellum, and is lost when it is destroyed."†

Mr Herbert Mayo, on the same subject, says, "The simplest explanation of the phenomena above described, is to suppose that an injury of the cerebellum, to a certain depth, produces a sensation analogous to vertigo; that the animal conceives itself either to be hurried forward, and makes a more or less perfect exertion to repel the imaginary force, or to be moving backward, and moves its limbs to a certain degree in correspondence."‡

Mr Solly, in discussing the present subject, observes, "A candid consideration of M. Foville's opinions must, at any rate, convince us that the views of Messrs Flourens and Bouillaud cannot yet be regarded as established doctrines of physiology."§

Thus, then, it would appear that, under circumstances the most favourable for encephalic vivisection (which the instance of the cerebellum certainly supplies), no uniformity in the results exists; that the facts proclaimed by different physiologists are opposed one to another; and that the inferences deduced are as various and contradictory as the premises. This is so obvious, that had not all of these writers had a prejudice against Gall's views, they would, probably, never have attached that importance to these experiments which most of them have done. The chief merit of them in their eyes seems to have been, that they appeared to afford something like fact and argument in opposition to Gall.

To determine the general character of the phenomena which ensue on mutilations of encephalic structure, and the influence which these latter exercise upon function, let us take the instance of the nervous system at large, many of whose offices are well understood, and which, in its general physiological relations, presents the closest analogy to the

\* Bostock's Physiology, vol. iii., p. 374.

† Alison's Physiology, p. 253.

‡ Mayo's Physiology, p. 245.

§ Solly on the Brain, p. 323.

induced; this result may also occur if the nerves be irritated. Now, although it is most whenever any division or portion of the nerve is abnormally acted upon, some change in its function takes place, this is not always appreciable external manifestation; and even when it is a thing like uniformity in different cases. Movements of function will coincidentally arise in cases which have sustained no direct lesion, on actions of sympathy existing, dependent, as previously upon fibrous communication, contiguity of position in the respective offices. All these together, render it very difficult to settle the extent of injury of a nerve to the changes in function that follow, because the conditions are connected with the special circumstances of individual cases; the variation in question is not of a nature altogether understood. Let us take, for an illustration, the case of a wounded finger, the nervous fibrils of which are cut; sometimes, the only effect produced is a pain which gradually subsides on cessation of the inflammation; sometimes spasmodic twitchings of the contiguous parts; and again, in other cases, tetanus even will be exhibited to the remarkable extent of the sympathetic influence pervading the whole of the nervous system; and we may exemplify such as are explicable by direct filiation. Then, again, the vicinity of parts may be exemplified by sympathetic influence, may be exemplified by the operation of the fifth pair of nerves upon the eye, followed, if his account is to be relied upon, by the loss of sight. Lesions of any kind affecting the sympathetic system, will produce similar effects.



exists at the centres, of a kind scarcely to be traced by anatomical research; yet such a mere probability cannot, of course, be rendered the basis of any sound physiological theory, however reasonable it may appear to be.

If these illustrations of nervous sympathy be fairly representative of its general phenomena, we must keep such facts constantly in mind in our estimate of the value to be attached to mutilations of the encephalon, unless it can be shewn that, in the latter case, there are reasons for inferring the existence of conditions of sympathy differing from those which obtain in the case of the nervous system,—a line of argument not very likely to be adopted. Let us, then, proceed to inquire, *first*, what the conclusions are which Gall's opponents have deduced from mutilations, in opposition to his doctrine; and, *secondly*, to what extent they may be just, or, on the other hand, susceptible of disproof; then, by application of the principles which have been illustrated above in their relation to the nerves, let us see if certain facts gained by vivisection, and employed very generally in opposition to Phrenology, will not admit of a true physiological explanation, in correspondence and harmony with all that Gall discovered respecting the functions of the encephalon.

In proceeding with this division of the subject, the author shall confine himself, in the detail, to examination of the vivisections of the *cerebellum*; because, while those of the *cerebrum* have mostly been abandoned as inconclusive, some of the most able of modern physiologists continue to attach force to the mutilations which have been practised upon the former, and to advocate a doctrine founded upon them,—which doctrine they seek to maintain and corroborate in all sorts of ways, especially by comparative anatomy and pathological phenomena.

The present writer is one of those who think with Georget, that the organic connexion of the sexual instinct with the cerebellum is probably that particular point of phrenological doctrine, in favour of which the largest amount of proof is obtained; and, on this account, he conceives it to be most important that the facts and the reasonings of the vivisectioners should be thoroughly sifted, with a view to discover whether or not their deductions concerning the cerebellum rest upon any solid foundation;—whether, in a word, the observations of Gall and his disciples on the one hand, or those of Flourens and his followers on the other, possess the higher physiological value.

Here there need be no repetition of the accounts which have been afforded by Rolando, Flourens, Bouillaud, and

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garded as the actual nervous centre. It is in many of the inferior creatures, regular take place after removal of the encephalon; this *must* be referable to the reflex agency. "In the Dysticus," says Dr Carpenter,\* "when the encephalon has been removed, the stimulus of the contact immediately excited regular and continued locomotion which lasted for some time." Further, it is the same physiologist, "In the healthy condition of the system, when the will is controlling all the other functions, the cerebellum is not immediately concerned in the main regulation of the organic functions, no such action is excited; but, in proportion as its control is lessened, the independent power of the spinal cord manifests itself."

Under all these circumstances, there are no grounds whatever for regarding the balance as a function that is special and distinct. To speak of the cerebellum as the organ of ordination of muscular action, suggests a contradiction; to refer to the complicated character of the cerebellary movements, directs our attention to the nerves in plexuses; and when we reveal the cerebellum as the organ of movement in the muscles, in the absence of the will, we are reminded of the true spinal cord. If, therefore, left, it may finally be asked, for the cerebellum? It is high time that the disciples of Flourens should settle this question definitively.

It would yet appear to be certain, that the cerebellum does not really disturb the harmony of muscular action, and throw animals upon whom it is removed very much off their balance; but why should we conclude the structure itself to be the organ of the balance of the body? The balance of the body is maintained by the cerebellum, but it is not the cerebellum that maintains the balance of the body. The balance of the body is maintained by the cerebellum, but it is not the cerebellum that maintains the balance of the body.



already engaged? Let us examine this matter somewhat in detail.

The general character of the sympathies which obtain in the case of the nerves, has been already dwelt upon; the conditions upon which they appear to depend have been illustrated; and it remains to be seen, whether the several phenomena of convulsions, paralysis, staggering, whirling round, leaping, and so on, which have attended vivisections of the cerebellum, do not allow of all reasonable explanation, through the anatomical and physiological relations which subsist between the organ in question and the medulla oblongata and motor division of the spinal cord.

It is an anatomical fact, that certain fibres from the anterior columns of the cord run into the cerebellum. As before stated, Mr Solly has the merit of being the first clearly to indicate this fact. "The corpora restiformia, or the processus e cerebello ad medullam oblongatam, are not, therefore, as they have usually been described, bodies which are formed solely by the posterior columns; nor are they bodies which consist of fibres from the posterior columns, to which some fibres from the anterior columns are added, the additional fibres lying perfectly parallel to those of the posterior columns; but they are bodies which consist of fibres that interlace in rather an intricate manner, the interlacing fibres, consisting of some from the antero-lateral, and some from the posterior columns."\*

Now, in this disposition of the upper extremity of the motiferous tract of the spinal cord, have we not ample data for explaining all the derangements that arise in muscular manifestation, on lesion of the cerebellum? Wherever there is close relation of two parts by interlacement of their respective nervous fibres, injury to one is well known to influence generally the actions of the other. When Legallois wounded the spinal cord in the dorsal region, perturbation of the heart's action ensued; but no one, from such a circumstance, would think of arguing, at the present day, that the office of the dorsal segment of the cord is to balance the heart; then, why insist upon the cerebellum balancing the body, because staggering, and other such symptoms, follow its mutilations? Moreover, the close propinquity of the medulla oblongata to the cerebellum, independently of direct communication, supplies an additional reason for anticipating muscular disturbance on vivisections of the latter, seeing that these can scarcely fail to influence the corpora pyramidalia, and the

\* Solly on the Brain, p. 158.

characterised the vivisections, as related.

It has been maintained, that the objectionments of Flourens and others, on the ground of sympathy, is untenable, for reasons stated, in the fol by Dr Carpenter :—" The fallacy of this object is shewn by the fact, that the much more severe removing the hemispheres, does not occasion sensation ; the power of performing the associated and of maintaining equilibrium, being remarkable after the loss of them."\* But then it should be that here there is no question of *severity of operations conditions of sympathy* ; in the case of the cerebri, the mutilation does not occur, as in the case of the cerebellum, contiguously to the medulla oblongata, the maintenance of harmony in the movements of the body, may be explained by the reflex agency of the spinal cord,—just as Dr Carpenter suggests to us the motion, even in the human subject, may, in certain cases, go on mainly through this influence.

When we carefully analyse the report made of the proceedings of Flourens, it becomes very obvious that the varying effects of encephalic vivisections upon the various functions, are best explained by the greater or less contiguity of the mutilated structures to the medulla oblongata. From the document in question, we learn that after the removal of the *cerebrum*, the animal so mutilated is drowsy, exhibits no signs of will, makes no selection ; but that, when struck or irritated, it maintains equilibrium is preserved in whatsoever way the creature chooses. If laid on its back, it rises ; it walks if pushed. If a frog, it jumps if touched ; when a bird, it flies if startled.

remarkably harmonious with Gall's physiology of the cerebral hemispheres, wherein volition and intelligence reside,—psychical conditions obviously absent on removal of the cerebrum; the animal under such circumstances, according to the expressions occurring in the report, existing as if in a dormant state; the *movements*, which always needed to be *excited*, were clearly referable to the reflex function of the uninjured cord. When M. Flourens wounded the tubercula quadrigemina, a whirling round ensued, plainly owing to their communication with the motor portion of the nervous centres. "After all," says Cuvier's report, "it must be observed, that in too deeply extirpating these tubercles, we interfere with the medulla oblongata; and then violent convulsions, which last long, make their appearance." Is it not strange that the same reasoning should not have been made to explain the convulsions, the whirling round, and the staggering, which arose on cutting and scooping the cerebellum? for, let it be observed, in the case of the pigeon subjected to experiment, the removal of the first fragments of cerebellum did but produce weakness in the action of the muscles, and some diminution in their harmony; and how should it have been otherwise? On attaining the middle of the cerebellum, and so coming nearer to the medulla oblongata, the creature displayed universal agitation; and, on removal of the whole, it no longer had the power of walking or flying; and, placed upon its back, it was unable to raise itself. And where is the wonder, if the anatomical connexions of the organ be but considered for a moment?

But, indeed, we possess a species of evidence in absolute and incontrovertible disproof of the doctrine of Flourens respecting the cerebellum, to which we may here advert—evidence which no sort of reasoning from any other class of facts can invalidate. This consists in the retention of the assumed function after complete removal of the organ. "I have seen," says Magendie, as quoted in a previous chapter, "and have demonstrated to others, a great many times, in my course of lectures, animals deprived of cerebellum, and which nevertheless executed very regular movements." And, as before stated, a pigeon whose cerebellum had been destroyed by M. Fodera, walked backwards and forwards; and to do this, some co-ordination of muscular action was required. If these statements be doubted, so may those of M. Flourens: the authority in the latter case is no better than in the former. Indeed, some might contend that Magendie, at any rate, from great practice, should be regarded as the most expert of vivisectors. It might further be said that, in



such effects as paralysis, convulsions, stagger round, by excitation of the appropriate nerve is certain, at any rate, that injuries inflicted on the brain will constantly exert some disturbance on the muscular system; and how, in an animal, is evinced except by some loss of harmony in the action and power of co-ordinating the locomotive system. Flourens himself, in one of his papers,\* records the results of cutting the terminal branches of the nerves as they ramify in the semicircular canals, which produce very little from those obtained by some vivisectionists doing with the cerebellum. If the horizontal canal on each side was divided, horizontal movements of the head took place from side to side, and rotation of the head on the vertical axis. Division of the inferior vertical canals on each side produced vertical movements of the head, but the animal was unable to turn its head on the vertical axis. If all the canals were divided, all sorts of movements took place. All which effects are obviously reflex in their origin, and referable to the reflex agency of the nervous system. Who shall doubt, that if some young aspirant to vivisection should injure the cerebellum, and, in the process, observe the very symptoms recorded by Flourens in the case of a lesion of the acoustic nerve—who shall doubt that he would be appealed to as certain corroborative evidence of the functions of the organ? The hasty inferences which have been deduced from vivisection of the cerebellum, constitute an excellent example of that gratuitous kind of reasoning which is characteristic of the proceedings of a certain class of men, who, in their excessive zeal for mere facts, neglect the principles, and abandon almost entirely the just reasoning and philosophical induction.

function. And at the same time it may be asserted, further, that nothing which is related in the accounts furnished of the vivisections of this structure, is, in the remotest degree, opposed to the physiology of Gall. In none of the instances is there the slightest evidence adduced, whereby it is so much as pretended that the sexual instinct survived the loss of the organ; so that the harmony of this class of facts with the phrenological doctrine is, at least, *not negatived*. But then it will be said, that as no influence was exerted upon the generative function by these powerful actions upon its assumed encephalic centre, neither was such harmony *affirmed*. Yet, where is the proof that the sexual instinct was actually unaffected by vivisections of the cerebellum? When extraordinary violence is done to any structure, the effect is very often to paralyse its influence altogether; what reason is there for supposing that this may not have been the case in the instances in question? Moderate violence, inducing what may not much exceed *stimulation*, very generally provokes functional manifestation; but then, this merely stimulant action is certainly not what is brought about in severe mutilations, and in the destruction of an organ. Again, it should be remembered that the habitual state of the function now under consideration is one of quiescence, and, on that account, it is one not so likely to reveal the fact, even when present, of its loss or diminution. Further, in such creatures as the pigeon and others, in which these lesions of the cerebellum have been practised, the outward indications of internal activity of the instinct (did we even suppose this to exist) could not very well be appreciated under the circumstances in question. But, indeed, how entirely vain it must be to expect, for a moment, that any animal distracted with pain could evince feelings which everybody knows demand psychical concentration in an eminent degree, for their sensible display! In a few words, it may be said of these vivisections of the cerebellum, that whilst they most certainly make nothing *against* the physiology of Gall, they have not been calculated, in their very nature, to yield anything of moment in its favour.

Many mutilations, however, are on record, which most unmistakeably corroborate Gall's doctrine concerning the cerebellum; some of these are recounted by Gall himself, as having come under his own observation; there are others related by Vimont, as having occurred within his particular experience; and some very important cases, ranking in a like category, are detailed by Baron Larrey, in his *Memoires de Chirurgie et Campagnes*. Other writers have also accumu-

truth which has already been established by legitimate process; they furnish excellent symmetry; the phenomena receive their simplest and most obvious explanation, interpreted by the doctrine of reciprocal influence; the statements will exhibit a reciprocal influence between the cerebellum and the external organs, which is intelligible only on the theory of reciprocal function; they admit of no elucidation by attending to conditions of sympathy, for, unlike the facts of other advocates of the muscular office of the cerebellum, whether immediate communication by nervous filaments or by the vicinity of position, will afford reasons for the influence of the one upon the other, which is affirmed to have taken place.

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#### IV. *Case of Double or Divided Consciousness.*

BROWNE, M.D., Medical Superintendent of the Lunatic Asylum, Dumfries.

On 15th March 1847, I visited J. H., æt. 18, a patient in the Lunatic Asylum, Dumfries, in quest and in the presence of Dr McCulloch. About two years ago, the patient, who is the wife of a respectable druggist, was affected with hysteria, and underwent a great constitutional change. The symptoms were the globus and spasmodic flexure of the fingers, and other phenomena which now exist followed this state, but were mitigated nor modified by the establishment of a constitutional change alluded to. For many hours each day the patient is in what may be called her normal state, and for nearly an equal number she is in an abnormal state, in which she has no recollection during the one, what passes during the other.



from the stomach. Between these two acts, the yawn and the eructation, the woman is vivacious, more mirthful than when *herself*, knits, reads, sings, acquires songs, converses with relatives and acquaintances, and is said to display greater shrewdness than at other times. Her letters are better in composition and penmanship than she can produce when awake or in the natural state. This may be called her state of clairvoyance. When aroused, she has no recollection whatever of anything that has taken place: she has forgotten, or rather has no knowledge or consciousness of the persons she has seen, the songs she has learned, the books she has read; and if she resumes reading, it is at the place at which she had stopped when in her natural condition. When she reads in her abnormal state, the same thing happens. The duration of the trance is generally about two hours. It occurs repeatedly during each day, and more frequently of late. The development of the fit is generally sudden and unexpected; but occasionally it is determined by noise, or the movement of articles in the room, such as the fall of a poker, or an alteration in the position of a chair. New impressions, however, seem to retard the process, as she is never attacked in church, which she attends regularly; although she may be, and has been, while returning from it. She dreams vividly; but does not always dream. It is suspected that she is superstitious, as her father spoke of the fulfilment of one of her dreams by the death of a friend. Her bodily health is perfect; all her functions are regular and vigorous. Her aspect is intelligent, and no impairment of mental power has taken place. She has latterly complained of headach after the cessation of the somnambulism; and upon one occasion, she described the painful sensation as confined to one side of the head, and as descending to the cheek upon the same side. Her father has had an attack of cerebral congestion: a brother died of a psoas abscess.

As the patient was at the time indisposed, it was proposed to the parents, and agreed to by all parties, that she should pay me a visit in the course of a week, and reside in my house for such a period as would allow ample opportunities for observation of the phenomena described. My visitor did not, however, make her appearance. Her father explains her absence in the following manner, in a letter dated 28th March. "I intended to have availed myself of your kind invitation to my daughter ere this time; but owing to a very remarkable and unexpected alteration in her complaint, it would appear that her visit to Dumfries will be unnecessary. You will be surprised to learn, that, from the moment you

that every day, and sometimes twice a day, about to become ill; but this passes off in a when she is relieved by a sigh. She complains and depression of spirits." In another letter April, she is described as "going on favourably; her convalescence still continues.

1. It is worthy of notice, that all, or nearly all, of a similar character—those related by Dr Dyce in *Physical Transactions*; by Major Ellicott in *Medical and Physical Transactions*; by Dr Dewar in *Medical and Physical Transactions*; by Dr Crombie's *Inquiries concerning the Intellectual and Moral Faculties*; by Dr Wigan in his *Duality of the Mind*—and have fallen under my own observation—have been females, affected with true, well-formed hysteria, and of those symptoms which indicate the existence of a morbid temperamental disposition; and that the morbid disposition has yielded to remedies, or to constitutional changes, and has not been disposed to influence hysterical affections.

2. It is worthy of notice, in the second place, that the healthy manifestations in this case were subdued by the impression, by the apprehension of being removed to the vicinity of a lunatic asylum, and perhaps by the fact that she was regarded as of unsound mind.

3. It is worthy of notice, in the third place, that there was no change or impairment of the identity, there was a total loss of one-half, or more, of the patient's life. There was in her natural and responsible state, an entire obliteration of sensations and impulses which went to make up her individuality, and rendered her the complex being she was, which preserved her in relation to surrounding objects. Could she, under such circumstances,

timately it could only have been applied while the offender was cognisant of the act for which she was tried or condemned, which would be when in an *abnormal* condition; and the singular anomaly would have arisen of transporting or hanging a culprit of unhealthy mind, *because* the presence of disease was necessary to restore a recollection and correct notion of the crime, accusation, and punishment. Is it not possible that such errors and cruelties have been committed? It is, at all events, necessary to bear in mind such cases as that now narrated, when forming an opinion as to the responsibility of persons accused of crime.

Crichton Institution, Dumfries,  
1st June 1847.

P.S.—Since the above was written, I have received the following communication from the patient's father:—

5th June 1847.

"DEAR SIR,—In reply to your letter of the 29th May, and your kind inquiries respecting my daughter, I am happy to say, the symptoms, we think, are still favourable. Since I wrote to you, her short and slight *ill turns* have become more frequent—say six times a-day,—but of a very mild character, and remaining no longer than one minute, during which time she is perfectly sensible, hears distinctly, but cannot speak, and is relieved by a yawn. She is quite as stout and healthy as before."

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V. *Case of Violent Mania, terminating fatally; with Remarks on the Influence of Diseases of the Stomach in causing Insanity.* By AMARIAH BRIGHAM, M.D. (From the American Journal of Insanity, No. I.)

Mr —, aged 38, married, shoemaker by trade, admitted to the New York State Lunatic Asylum, Utica, February 1843. Been deranged three weeks; supposed cause, mental excitement from attending numerous temperance and religious meetings and attempting to lecture; though a predisposition to disease was produced, we presume, by intemperance. He had been very intemperate for many years, and though naturally very robust and athletic, has become much enfeebled. About one year since, he reformed and joined the Total Abstinence Society, and has since been temperate, industrious, and thoughtful.

A short time previous to his attack he attended several protracted religious meetings, and also temperance meetings,



posed to be moving; rancies he has been here  
revolutionize the world, and that all he does  
ance with revelations made directly to him.  
Sleeps but little, and vomits occasionally. The  
tom made us fearful of severe disease, and with  
his friends.

His mind seems chiefly occupied with plans  
the temperance cause; he is anxious to lecture  
stantly writing letters upon the subject. This  
a specimen:—

“ MY DEAR SIR,—I have the glorious satis-  
nouncing to you, and the inhabitants of —  
evening, God willing, I shall tell such a dra-  
ten dark, dismal years of drunkenness, seven  
town of A—, one and a-half in B—, some in  
breakneck scrapes which I escaped almost by  
ing me that God was seeking to shew me  
shall tell a story that will astonish the world  
my way of addressing, my prospects are now  
S. G. and F., and in a few days to put for N  
and plant myself, and shall commence on  
lecture; shall advertise in full particulars, and  
daily papers, courses of lectures, and send of  
God speed the temperance cause with the spee  
and glory to God in the highest.

“ Yours, with great respect,  
“ —

On admission, he was noisy and violent, break-  
ing everything to pieces that he could find; in  
warm bath, where he remained half an hour,

does not cease. Is constantly repeating or hallooing at the top of his voice the Lord's Prayer, both day and night. So intent is he upon repeating this, that it is difficult to engage his attention for one moment to anything else. His appetite failed, notwithstanding the use of bitters and tonics; lost flesh rapidly, and died the 15th of May. High excitement continued until the last, and he died attempting to say the Lord's Prayer, which he had repeated (we speak considerably) more than fifty thousand times during the time he was with us.

REMARKS.—Circumstances prevented an autopsical examination; but in a case strikingly similar, we found the mucous membrane of the stomach extensively diseased, resembling in appearance that represented by Dr Sewall, as the appearance of the stomach in those who die of delirium tremens. We apprehend this was originally a disease of the stomach, *Gastritis*. Cases somewhat similar may be found in Broussais' *History of Chronic Phlegmasiæ*. The disease of the brain was probably the consequence of the irritation of the stomach. It is, however, often difficult to determine in which organ the disease originates, when both appear to be diseased; for affections of the brain may produce disorder of the stomach.

On this subject we have yet much to learn. Cases occasionally occur, in which the chief disturbance, and apparently the principal disorder, is in the stomach—but which organ, on examination after death, is found in a healthy state, while the brain exhibits marks of long-standing disease. On the other hand, primary disease of the mucous membrane of the stomach may cause disorder of the brain, and the latter become so distinct and violent, as to cause the affection of the stomach to be overlooked—to the imminent hazard of the patient.

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VI.—*The British Quarterly Review*, November 1846, Article  
"PHRENOLOGY."

*To the Editor of the Phrenological Journal.*

SIR,—In the *Lancet* for December 19 and 26, there appeared a criticism by Mr Combe upon an article in the *British Quarterly Review*, entitled "Phrenology," of which he imputed, and correctly, the authorship to me.

This criticism was reprinted in the *Phrenological Journal* for January 1847, which contained also some strictures by  
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ment, or test of Phrenology; and, *lastly*, terms made use of by the writers referred to with "disingenuous absurdity," and innocent guilty of wilful misrepresentation and dishonesty.

To the latter I reply first, and briefly. I do not mean myself to recriminate or to be drawn by me, into an unmannerly display of temporary imputation of motives. I content myself with charges. My measurements and calculations were made and carefully made. They were made with a view of testing the truth of Phrenology, and by a method which I believe to be precise and complete.

Having made these observations, I deemed it worth publication, and, although not extensive enough to form the basis of an original paper, sufficiently interesting to me to throw them into the form in which they are now presented.

I feel rather gratified than otherwise, that Mr Combe's constitutional calmness and self-control should have been betrayed into the use of such coarse, rude, unjustifiable, and unlike himself. I feel somewhat deeper than those which he has expressed under the contemptuous tone assumed in his reply, sometimes painful, sometimes even irritating to those who have long cherished and published as their favourite, but now untenable creed.

In regard to Mr Straton's language, I do not think it was not without excuse, in the discovery of the error after the publication of Mr Combe's reply, and the inaccuracy of what appeared as my table.

This leads me at once to the first objection to the article in question.—the inaccuracy of the



scripts, and compare them with the printed tables, when I immediately discovered that the gentleman employed by me to transcribe the tables for the press, had inadvertently copied a table of *calculated* measurements, instead of the one containing the actual measurements of the casts.

The table thus accidentally published, was one, in forming which the capacity of the crania had not been *ascertained*, but in which a number was procured by *calculation*, believed to be proportional to it; and the measurements of all the crania were then made to correspond with those of a cranium of the capacity of Bruce's. This method, as being inexact, I relinquished, and having found the capacities of the crania by immersion in water, I made new calculations, bringing all the measurements to those of a cranium having the capacity of Swift's. These are correctly given in the second table of the article in question, while the first table of that article contains the calculations which I had first made.

The accidental publication of this table of calculations as the actual measurements of the crania which I had examined, has afforded Mr Straton an opportunity of shewing that what he believed to be my measurements was very inaccurate, and that they did not correspond with the calculations given in the second table. This, of course, they never could do, not being the measurements from which the calculations were made.

I now publish a table of the true measurements, and, along with it, I reprint, in the second columns, the calculations on which my argument was founded. This table will at once meet all the objections as to the inaccuracy of my measurements and calculations; the former will be found, I believe, to be sufficiently correct, and the latter will be seen to correspond with the former.

Before introducing these tables, I may be permitted to state here what the object of my calculations was, in order that I may be intelligible to those who have not read, or have now forgotten, the original article, and Mr Combe's reply to it.

I set out by assuming that the principal, if not the sole means of estimating the size of a phrenological organ was by its degree of prominence, compared with neighbouring organs, or the neighbouring surface of the cranium. I pointed out that this degree of prominence could be estimated by measurement with the callipers from some central point, such as the *metus auditorius*, or by measuring from one organ to another. I went on to shew that we were prevented from making a direct comparison of the measurements of one cranium with those of another, in consequence of

the corresponding organ in another individual

I proposed, therefore, by a well known geometrical principle, which may be stated thus, that the cubes of homologous solids are to each other as their homologous measurements; that all the measurements which I had made into crania of a uniform capacity; that is to say, I converted all crania into crania of precisely the same size, one, however, retaining exactly its own *form* and *relative development of its different parts*. I selected crania of individuals either notorious for some peculiarity of course of life, or whose characters were well known, and assumed that the measurements of the crania would correspond with the known characters of the individuals, if Phrenology was true. This is the test of Phrenology.

Mr Combe argues at great length that this is not the correct mode of *testing* Phrenology, because it is in which Gall and he satisfied themselves of the truth of a proposition, of a calculation, by any other mode than by the same steps by which another had arrived at the result. He has had three weeks' tuition in arithmetic, and knows this; nay, he knows that without other tests than his calculations, simply repeating them, he has very little certainty about his results. Mr Combe says that I and others who have not received Phrenology rejected it because we have not pursued Dr Gall's method that we should have begun with persons in whom particular organs were either extremely large or small, defective, examples of which kind are given in the *System of Phrenology*; that, after satisfying

for making a phrenologist that could well be devised. It is like the monkey who had got his tail chopped off, trying to persuade his companions that he knew the fashions. Look at every thing which Dr Gall and I did, and exactly in the same way, and you will be exactly of the same way of thinking. I have no doubt that there are many skulls, particular prominences on which correspond with the phrenological doctrine. Such coincidences must exist. They are admitted and candidly pointed out in the article referred to, where they occur in my own observations. That such coincidences were observed by Dr Gall and by Mr Combe; that such examples are collected in phrenological museums; and that upon these they and their followers founded their faith, are points which I presume no one will doubt.

But assuming that these extreme examples and the general experience of phrenologists in schools, families, and prisons, have made out a satisfactory case for Phrenology, and that it is true, then surely the converse of Mr Combe's proposition will hold true also, and persons having certain faculties strongly developed will have the corresponding organs large, compared with the other organs in their own heads. This is the test to which I have endeavoured to reduce Phrenology; and because it is not Gall's method of *studying* it, because I do not choose to walk blindfold in the steps of Dr Gall and Mr Combe, it is therefore no test at all. It is *a new method*, says Mr Combe; it is *a system*; it is "*Skae's Phrenology*;" and this, although the results are merely and entirely *negative*; it is *my* Phrenology, not Gall's.

The following is the table, which, if correct, as I believe it to be, Mr Combe is most welcome to try his wit on again. If he cannot get from it, and from those formerly published, results harmonizing with Gall's system, he may endeavour to extract from them, which I have nowhere ventured to do, a new system of Phrenology, which shall be Combe's, if he chooses, not mine.

In the following table, the first column under each head contains the actual measurement of the phrenological organs, and the second column the measurement of those organs when all the heads are brought to the same capacity.





Swift.		McKean.		La Fontaine.		Pollard.		Bruce.		Haggart.		St.
al.	Calculated.	Actual.	Calculated.	Actual.	Calculated.	Actual.	Calculated.	Actual.	Calculated.	Actual.	Calculated.	Actual
15	129-15	111-05	129-15	149-5	129-15	122-9	129-15	136-5	129-15	128-6	129-15	119-2
3	7-6	7-35	7-73	7-8	7-52	7-7	7-83	7-8	7-66	7-45	7-46	6-9
4	7-4	7-23	7-6	7-7	7-34	7-4	7-52	7-4	7-26	7-43	7-44	7-
5	4-5	4-5	4-73	5-2	4-95	4-5	4-58	5-4	5-3	4-2	4-206	4-5
3	5-6	5-5	5-78	6-	5-72	5-4	5-49	5-7	5-59	5-4	5-41	5-3
2	4-2	3-84	4-04	3-95	3-76	4-3	4-37	4-57	4-48	3-77	3-78	3-35
7	4-7	4-4	4-63	4-65	4-425	5-1	5-18	4-9	4-81	4-52	4-53	4-44
	5-	4-8	5-05	5-04	4-8	5-4	5-49	5-4	5-3	5-1	5-11	4-64
3	5-6	5-1	5-36	4-2	4-003	4-5	4-58	4-8	4-71	4-	4-01	4-5
3	5-8	5-7	5-99	6-1	5-81	5-65	5-74	6-2	6-1	5-36	5-37	5-62
3	5-6	5-78	6-08	6-3	6-09	5-77	5-86	6-05	5-94	5-6	5-61	5-5
3	5-5	5-23	5-5	5-6	5-34	5-25	5-34	5-25	5-15	4-95	4-96	5-02
3	5-6	5-4	5-68	5-3	5-04	5-75	5-85	6-	5-89	5-7	5-71	5-3
	5-1	5-1	5-36	5-13	5-17	5-15	5-51	5-6	5-10	5-5	5-51	5-

On comparing the measurements contained in the second columns of this table, it will be seen that the results, as I have pointed out at some length in the article which is the subject of this controversy, are, generally speaking, at variance with Phrenology, and, in many instances, so utterly irreconcilable with its truth, as to appear altogether subversive of it. Haggart, Heloise, Burns, M'Kean, and Stella, have an organ of Amativeness half-an-inch less than Bruce, in relation, it must always be remembered, to heads of the same size, and less than Swift, who is described as "naturally temperate, chaste, and frugal." Lockety, a murderer, has the smallest organ of Combativeness; Pollard, another murderer, has less than either Heloise or Stella; while the notorious Haggart has an organ which measures *one inch* less than Swift's, and half-an-inch less than Stella's, and scarcely more than that of the facile and apathetic La Fontaine. His Destructiveness is *half-an-inch* less than that of the French poet, and less also than that of Heloise or Stella.

Pollard, who had an ungovernable propensity to kill, has both these organs small, compared with the other individuals, and small also relatively to the other organs of his own head. In Haggart, too, the counteracting organs are relatively larger than in Swift, Heloise, Stella, or Burns, while his organ of Acquisitiveness, although one of the most noted thieves on record, is smaller than any of the other nine. Swift, who was no thief, has the largest *Acquisitiveness*, and the smallest *Benevolence*. La Fontaine, a thoughtless sceptic, has the largest organ of *Veneration*, and the next in point of size is Haggart's. And, lastly, to sum up this brief *resumé*, Swift has the smallest organ of *Wit*!

These are a few of the facts with which Mr Combe and Mr Straton had to contend; and in what, if the accuracy of the measurements and calculations is now admitted, for they do not deny the accuracy of the principle on which they are made,—in what does their defence of Phrenology consist? Mr Combe first endeavours to depreciate the value of precise measurements in anatomical and physiological questions, and to ridicule me for requiring such precision in proof of Phrenology. "Large," "full," and "small," are terms sufficiently accurate for describing the relative size of *the fingers*; and the terms "more extensive," "much larger," are applied by distinguished physiologists to the large nasal organs of Indians and dogs, and are considered precise enough. And, with regard to the senses the terms "*acuteness of their hearing*," and "*wonderful acuteness of smell*," are printed by Mr Combe in italics; and I am gravely asked whether I understand



content to take the common expressions, in  
sive, &c., as sufficient, for this obvious rea-  
cient for all practical purposes ; there is no  
the facts ; there is no physiological or meta-  
pending upon the question of *size* in these  
knowledge of the functions of the olfacto-  
nerves depends upon other data altogether  
relative size of those nerves in different anim-

But in every anatomical or physiological  
the item of size forms an essential eleme-  
amenable to the same demands as those  
mechanics, and demands the same precis-  
and offers measurements as minute and pre-  
accurate and minute methods of mensuration  
question of Phrenology is one *altogether of s*  
upon measurements which are uncertain and  
disparage or discard those which are precise  
to prefer ignorance and error to certainty and

Messrs Combe and Straton object to me-  
because they proceed upon the assumption  
any of the so-called organs can only be esti-  
gree of prominence which they display as com-  
neighbouring surface of the cranium, or the  
some central point. They contend that none  
of the *breadth* of the organs, except what is  
reference to the breadth or size of the entire  
assert, that the breadth and limits of an organ  
nised by the hand and eye. " If the writer  
says Mr Straton, " will take the trouble to lay  
the *outlines* of the organs on any cranium at  
difficult matter to do, if he minutely study  
nature) ; if he will mark any dozen

distinctly indicated; and, in every head, a skilled hand and eye, and intelligent honest mind, may with due care discriminate them." To all this I reply by a simple and distinct denial of the truth of these assertions. I believe I have examined as many crania as either Mr Straton or Mr Combe, and can furnish the former with a few choice specimens from burial-grounds, and select museum ones too, if he prefers *them*, for the purpose of "marking the outlines;" and if he and Mr Combe will undertake to mark the same outlines upon any six in the collection, I will give up the whole question at issue.

In fact, this assertion is too ridiculous to require comment or refutation. There are no such "outlines;" nor do I believe there is a single anatomist in Europe who would for an instant admit that there are any "demarcations," such as Mr Combe says enable us to determine the form and position of the phrenological organs.

I repeat the position I have assumed: there is, and can be, no other estimate of the so-called phrenological organs, than that assigned to them, viz., their degree of prominence. Of this the callipers can take a much more accurate measurement than the hand and eye; and to this standard I have endeavoured to bring them. The principle I have adopted, of homologous lines, has not been impugned even by the phrenologists themselves. If it is a correct one, let them make their own measurements and their own calculations on this principle, and let them shew any ten heads of the same size, the measurements of which harmonize with the doctrines they maintain.

The next objection made to my argument is, that the results of my calculations are entirely vitiated by taking the head of Swift as a standard of comparison. Swift, they say, became an idiot long before his death; therefore the whole of the calculations are preposterous, a "folly," and a "solemn farce." Most profound critics! The skull of Swift is nowhere, in the article written by me, alluded to as a standard of comparison. True, the measurements of all the crania are brought to those of a cranium having the *capacity* or size of Swift's; but if we had brought them all to those of the *capacity* of the head of a walrus, it would not have vitiated in the least the comparison instituted. The simple object was to bring them all to the *same size*, and then to institute a comparison between the measurements of the organs and the development of the faculties in the individuals in question. The skull of Swift was taken as being nearly the mean size; but if the whole had been converted into the measurements

section that Swift did labour under mental disease, be called upon by Mr Combe "to prove the diseased heads to furnish conclusive evidence of insanity" in the question at issue? If the *form* of an *adult* is altered by imbecility, or any form of insanity, it is for Mr Combe to adduce evidence of the fact, and not the assumption is against him. I deny that there is any evidence in support of the *hypothesis*; for surely Mr Combe finds fault with the selection of crania made for the purpose of measurement, and broods over the fact that I chose them "*because of*" the existence of objections to them. I made no such partial selection; I went to the Phrenological Society's Hall, in Edinburgh, and there selected the casts of crania, so I was limited in my selection only by the fact that I avoided casts of *heads* which had been more or less covered with hair and soft parts, or casts of skulls and not of crania, had *no meatus* to measure from, or of crania of which we knew nothing. Nay, even of some of those whose crania I measured, I knew little or nothing at the time, save what was on them, "a murderer," and obtained references to their history, only from my measurements and calculations, from Mr Combe. In the rest of Mr Combe's reply he contents himself with appealing from my measurements to the *method* by phrenologists. No intelligent person can fail to see, he asserts, by this method (the hand and eye) that I am wrong, and that he and the other phrenologists are right, even in regard to the crania which I have measured. He says, with regard to one cranium, that any person will perceive, with *half an eye*, that I am wrong in this; this may be satisfactory to those who are not

On one point only, where Mr Combe thinks he has got me at a vantage, he makes a stand ; and that is with reference to the *Combateness* of Stella, whom, he says, I represent as having been *only* "a patient and peaceable woman." The *only*, with its italics, is Mr Combe's, who accuses *me* of disingenuousness ; and his defence of Stella is derived from some lines addressed to her by Swift, and from a *single act* of her life, in which she exhibited great courage and determination. But I leave it to any one to say, whether, according to the acknowledged doctrines of phrenology, this single act, or the whole tenor and course of her life, will explain the difference between her character and that of Haggart, so as to accord with the measurements of their respective organs. Stella has more Destructiveness, Combateness, Acquisitiveness, and Secretiveness than Haggart, and she has less Firmness, Veneration, and Benevolence ; yet the one *was*, in the general tenor of her life, "a patient and peaceable woman," and the other a notorious and most dangerous thief, housebreaker, and murderer.

In conclusion, allow me to add, that I had no wish to place myself in the position of an assailant of Phrenology ; I recorded what I had found as a searcher after truth. I am quite sensible of the advantages we have derived from Phrenology, both in the department of Physiology and Metaphysics. Perhaps we are in the pathway which may lead to truth ; my own observations lead me to believe, that in the *craniology* of their system, phrenologists have not yet arrived at that point ; but in the present state of our knowledge, I believe that the system and its terminology afford most useful formulas for the expression of opinion, and, it may be, for the advancement of science. I am, &c.

DAVID SKAE.

ROYAL EDINBURGH ASYLUM,  
1st June 1847.

#### *Remarks on Dr Skae's Letter.*

Dr Skae "feels rather gratified than otherwise, that a gentleman of Mr Combe's constitutional calmness and self-possession should have been betrayed into the use of terms which are rude, unjustifiable, and unlike himself." This seems a strange source of gratification, but the reason assigned for it is equally remarkable. "Truth," says Dr Skae, "is sometimes painful, sometimes even irritating, especially to those who have long cherished and publicly defended a favourite,



under those of anatomy, physiology, and mechanics, in this respect—they want precision they are not definite, nor tangible, nor measurable. Dr Combe expressed the opinion that it was difficult to teach physiology (which Dr Skae has been called upon to do) as an exact science like chemistry and medicine. He affirmed that the exact measurements of mathematics have not been applied to the discovery of the uses of those parts of the nervous system, the uses of which are not ascertained. Dr Skae does not produce an example from physiology to contradict this assertion, or to confirm his previous statement. He says, “Our knowledge of the auditory and olfactory nerves depends on comparative data altogether than the comparative size of different animals.” This is quite true, but it is not sufficient. The physiological doctrine under discussion, like that of the other sciences, bears a proportion, *ceteris paribus*, to the size of the organs. If, in the case of the external senses, the intensity of their intensity on the size of their organs is ascertained by estimating their size by the aid of the hand without mathematical measurement, (as Dr Skae has asked) may not the same thing be done by the aid of mathematics in the case of the cerebral organs? Dr Skae says, “in every anatomical or physiological question, the item of size forms an essential element, the same as in mechanics, and demands the same precision. In mechanics, offers measurements as minute and precise as in physiology. The accurate and minute methods of mensuration confirm that, in regard to every part of the nervous system, the rule holds good that, *ceteris paribus*, the inter-

been applied to the determination of this point. He has not supported his allegation by a single example. The instances which we adduced in our previous article, page 66, exhibit the estimative mode of judging of size, adopted by the most celebrated physiologists, in their endeavours to prove the relation between size in the organ and power in the function of the external senses.

Let us, however, meet Dr Skae on his own ground. He came forth with all the airs of a master in science, to supply to Phrenology measurements characterised by "precision and accuracy." He presented what he called tables of measurements based on mathematical principles, and possessing all the certainty and accuracy of exact science. Mr Straton by measurements, and Mr Combe by the ordinary method of estimative observation, speedily discovered that the table of *actual* measurements published by Dr Skae, and on which his calculated measurements and deductions professed to be founded, was altogether inaccurate. How does Dr Skae now support the facts and measurements which led to the use of the epithets which give him so much gratification? Does he maintain that his actual measurements were correct, and the condemnation of them unjust? Nothing of the kind. He informs us that what he formerly gave as a table of *actual* measurements, and what Mr Straton and Mr Combe, in reliance on his boasted scientific accuracy, treated as such, was no table of actual measurements at all; but a table of *calculated* measurements, copied by mistake, printed by mistake, and published to the world by mistake, as evidence to overthrow Phrenology! When a writer is constrained by the party whom he has voluntarily assailed, to make such a confession as this, is there no "disingenuousness" in his turning round and twitting that party with his having caused him to lose his temper by the *weight of the truth* which he has brought to bear against him? Nay, is there no "absurdity" in such a course of proceeding? Apparently, Dr Skae not only claims the privilege of blundering, and putting forward his errors as exact science, but demands that even while they are yet unacknowledged by himself, although detected and exposed by his opponent, they shall be treated by that opponent in the full perception of their inaccuracy, with all the respect and courtesy which is due to scientific truth. He resembles those persons who, after they have committed a mistake which has occasioned a great deal of trouble to others, think they make an ample atonement by coolly explaining the series of blunders by which they were led into the error; altogether losing sight of the duty which lay upon themselves of

gone out into schools, prisons, and families, fixed upon our minds, and looked about us for them! ' tried to find similar living examples; excellent. The most perfect recipe for making that could well be devised." Truly, *this* "a specimen of misrepresentation by an a science. By referring to page 68 of the pre reader will see that Dr Skae has here used berties with Mr Combe's text. Mr C. recasts and skulls in which *particular organs* large or small in proportion to the others, were unmistakable; and he added, that "sired to find the truth, would, *after studying fixing them* in his mind, have gone into school general society, as Gall and his followers tried to find *similar living examples*; and compared the power of manifestation with the in each of the individuals observed." Not said about the necessity of previously sat that " *in those specimens* the very large or *coincided with very large or very defective cortices*." This is pure invention by Dr Skae mited his proposition to the *forms* of the that the connection of large organs with p and of small organs with feeble faculties, w be determined by comparing the size of ea power of manifestation in living individual ceeds to compare his own version of Mr Co making a phrenologist," to "the monkey (fox chopped off, trying to persuade his compan the fashions!" If this comparison be a good

off," he has made it look like a calf with two heads! The reader must determine *which* of the disputants has lost his *head* or his *tail* in this controversy.

But Dr Skae's logic is equal in truth and efficacy to his simile. He says that Mr Combe and Mr Straton "do not deny the accuracy of the principle on which the measurements and calculations are made;" that his measurements "are precise and accurate;" that "the principle I have adopted, of homologous lines, has not been impugned even by the phrenologists themselves;" and that "it would have been much more to the purpose if Mr Combe had shewn that the measurements *which I have made*, and the calculations founded upon them, are wrong either in principle or detail; and this I think he has failed to do."

Such is the manner in which Dr Skae meets the observations of Mr Straton on page 44 of this volume, and those of Mr Combe on page 73. If by "the principle," he means the principle that similar solids are to each other as the cubes of their homologous lines, we certainly "do not deny" it; but if he means to say (as he obviously does) that he *has* measured the homologous lines of similar solids, we emphatically deny *this*, and ask him where the "similar solids" are, of which the lines he has measured are the "homologous lines." So far from being able to shew them, he even admits, in words, that the "*breadth* or size of the entire head" modifies (as indeed it must) the breadth of the individual organs; yet, in the face of this admission, he has proceeded to measure, calculate, and make deductions, as if no such thing were the case—a course of itself sufficient to vitiate all his labours. In two heads, one with a very narrow, and the other with a very broad occiput, he finds the size of the organ of Philoprogenitiveness by measuring a straight line from the meatus auditorius to the centre of that organ in each. Now, even supposing the meatus to be at one extremity of the organ of Philoprogenitiveness (which it is not), the organs in the two heads of such different breadths plainly cannot be the "similar solids" assumed. Mr Combe, on p. 73, gave Dr Skae even more credit than was due, in saying that he "dispenses with all consideration of the varying peripheral expansion of individual organs, *except such as depends upon the breadth or size of the whole head*;" for, while professing to recognize the influence of the breadth of the whole head, Dr S. has not *in practice* entitled himself even to the benefit of being allowed to have made that exception. In point of fact, he proceeded to estimate the size of each organ by its length alone; and, as we stated in p. 73, "even



Thus, he has measurements from 'meatus Adhesiveness of left,' 'Wit to Wit,' 'Tune on." The perfect silence which Dr Skae to the fundamental objection here stated proceedings, is not a little remarkable; especially along with his reiterated assertion of the principle on which he proceeds is more remarkable is the fact, that while, in the preceding communication, he blandly "table of *actual* measurements" which he in which his opponents commented, believing in *no table of actual measurements at all*,—in at he says, "that it would have been much more if Mr Combe had shewn that the measurements made" (namely those which he now confess measurements), "and the calculations founded wrong either in principle or detail,—and they failed to do"!! Both Mr Straton and Mr that the measurements were wrong in principle and Dr Skae, though in one breath he says have failed to do so," in another actually table of "measurements" was exactly what be—an utter blunder! If such a mode of be not "disingenuous," it is at least very "

To illustrate Dr Skae's method of measurement apply it to other objects. Suppose it is wanted the cubic contents of the domes of St Paul's and Peter's in Rome, and St George's in Edinburgh. A rate mathematician will attain this end by actual measurement the number of cubic feet. To follow Dr Skae's method, however, we shall

from the centre of the front of the main porch—to the top of the dome, and draw the inference that the cubic contents of each dome are accurately represented by the length of that line. He speaks of converting the different crania which he measures into "crania of precisely the same size or capacity, each one, however, retaining exactly its own form and the same relative development of its different parts." Suppose that we should do this with the churches. How much nearer would it bring us to the determination of the relative magnitudes of the domes if we still continued, in each of the converted figures, to attend only to the line from the base of the porch to the top of the dome? That line would include the height of the church as well as of the dome; and even although it gave us the height of each dome itself, how could the cubic contents of a dome be calculated, while no measurement was taken of the breadth of any part of it?

If it be said that the cerebral organs are, in this respect, differently situated from the domes of churches—that all the boundaries of domes are so definite that every dimension can be ascertained by measurement (which cannot be done with cerebral organs)—we not only admit the fact, but maintain that, as Dr Skae both admits and urges it—nay, as the reader has seen, admits likewise that the breadth of each organ is modified by the breadth of the head—he ought to have perceived at once that the mathematical principle of homologous lines was totally inapplicable to his purpose. The phrenologists, who did see this, have insisted that the estimative mode of observation is the only one here applicable; but mathematical measurements alone will satisfy Dr Skae. If we wished to ascertain whether John, James, or Robert had the largest nose or chin, it would be evident that we could not apply mathematics to the solution of the question, because there are no mathematical lines separating the top of the nose from the forehead, or its sides from the cheeks, or bounding the chin; but by accurate *observation* with the eye and hand, we might estimate the sizes of these parts with so much certainty, as to leave no doubt in our own minds on the subject. Dr Skae, however, if he followed his own principles, would treat with disdain the conclusions thus attained, and, asserting that physiology and anatomy are exact sciences, would insist on applying mathematical measurements to the parts in question. Finding it, however, impossible to measure all their dimensions, he would measure straight lines from the meatus auditorius to the tip of the nose, and to the tip of the chin, in the different individuals, and insist that the relative lengths of these lines afforded mathematical

## II.—NOTICES OF BOOKS.

1. *The Use of the Body in Relation to the Mind.* By GEORGE MOORE, M.D., Member of the Royal College of Physicians, &c. &c. London: Longman & Co. 1846. Post 8vo, pp. 431.

We hold that a systematic review of a rambling book, especially if it be a very long book, is a literary impossibility. It is not two years since we met with Dr Moore before, when we found it beyond our power to allot more than one page to his 305.\* What shall we do now when he comes back with no less than 431, under the same general title with their predecessors—that title, however, being reversed? Can it be that the author took the hint we ourselves gave him, to twirl his thumbs the other way, and try what difference it would make, having written on “the power of the soul over the body,” to write on the subserviency of the body to the soul? Somebody—a logician he must have been—once denied indignantly that his left leg was shorter than his right, although he was quite willing to admit that his right leg was a little longer than his left.

In such circumstances, our readers will not be surprised when we declare that, on reading over our former unipaginous review, we find that a literal duplicate of it would actually suit Dr Moore’s new work. The same philanthropy, amiability, and piety,—the same mixture of the sound and the useful with the contradictory and absurd,—the same unexamined nursery-prejudices, lagging behind the age,—the same misplaced appeals to the sacred Scriptures, or rather his own interpretations of them, to solve mysteries of nature quite beyond the reach of the human faculties,—the same dogmatism in moral conclusions, and the same assumptions of the *essence* of mind, soul, spirit, and matter,—ground on which angels might fear to tread,—all these teem in the new volume, as they formed the staple of the old. Had Dr Moore’s two works come forth forty, or even twenty years ago, their large admixture of truth would have anticipated the age, and done much good, whilst their many errors would have passed for deep thinking, and set many kindred minds to grope in the same regions of darkness. But now that there are scores of volumes which have rendered his *sound* physiological doctrines

\* Vol. xviii. p. 361.

of what it is all about. System to guide reader it has none. Its numerous chapters detached essays, each bearing resemblance complacent averment, assumption, explanation and pious ejaculation, without succeeding in making any impression on even the wakeful reader.

Dr Moore persists in cherishing, with unabatement, that horror of Materialism which was a prominent feature of his former work. Immaterialism we do not here object to; one, on both sides of which so much has been as feebly urged, that dogmatism respecting appeared to us unbecoming.† But we must object against his bold assertion, that unless the immortal part of man's constitution is something other than the known qualities of matter, responsibility is impossible. "the hopes of deathless capacity and immortality are extinct."—p. 75. It is a rash thing to pervert the idea of immortality on a metaphysical dogma, which has appeared inconclusive to multitudes of able minds. The fact, as we confidently believe and maintain, is, that even if Materialism were true, the evidence of man's immortality would be of its genuine force.‡

\* In fairness, however, we quote what the author says of his object. He has not been to produce a systematic treatise, which would be repulsive, except to a few, but, in a series of connected essays, familiarly to invite public attention to the knowledge of which, although quite overlooked by the materialists, is essential to individual prosperity. The topics are presented in the study and practice of his profession, which consists of moral deductions from physiological facts, and a deeper investigation than this work.



Whether the mind is immaterial or material, it is God's work. If it is material, then Almighty Power has given to matter the sublime qualities of thought and feeling: so to Him it appeared good; and it is impious to imagine that if He has done so, He has not retained the power of rendering mind immortal. On the other hand, it is gratuitous assumption to affirm, that if the mind be immaterial, it is necessarily immortal—that the same Power which created it at birth, cannot decree its annihilation at death. If another revelation than that of nature has “brought immortality to light,” immortality was the destiny of man before it was revealed to him—quite irrespective of the question whether the conscious part of his being is material or immaterial. So much for this bugbear, of which a thinking man should be ashamed to avow his fears. Dr Moore is, as might also be anticipated, one of those who, forgetting the persecutors of Galileo, bring the Scriptures to limit and control natural truth. This were unreasonable, even had their teachings been as clear to human apprehension as the simplest natural truths—as clear as that there is light when the sun appears above the horizon—and not subject to numberless interpretations, each interpreter bringing natural truths to his own scriptural standard.

The present work consists of a preface, introduction, and twenty-two chapters, each of the latter much more an independent essay than part of a systematic development of the subject of the use of the body; some of them, however, do keep the work's title in view more than others,—such as the chapters on the blood, the nervous system, the senses,—intoxication,—physical agency on moral states,—for which we must refer to the work itself; remarking generally that the philosophical errors to which we have already alluded fundamentally vitiate these discussions, and almost deprive them of practical value. The chapters on Individuality and Identity, the Stages of Life, Light in relation to Life, &c., Food, Fasting, Sleep, Air and Exercise, may be read as so many essays; and will be found to contain much that is valuable and interesting, if not original. Any one who will read the book indolently, with its many curious facts, incidents, anecdotes, and gossipings, without making any effort to supply its defects or combat its numerous fallacies, will be repaid with amusement, and, if new to him, instruction; and not seldom he will meet with passages which abound in kindness and benevolence, expressed with no mean eloquence. The language is generally clear and correct, but, though frequently vigorous, has in too many places a degree of verbosity which greatly weakens it, and indicates a want

" If we would study the organization of the brain, phrenologists, we find an impediment to our reception of faculty, from the circumstance that, so far as distinct organs such as their system implies, all the brain are manifestly adjusted with especial regard to function. The *motiferous fibres* are ramified along the lower and upper part of the surface of the brain; and they expand in contact with the grey matter over the convolutions of the brain. The extremities of the *motiferous fibres* are covered by the expanded layers of the *sensiferous fibres*, which are in contact with the grey substance on the convolutions. The entire mass of brain is constructed with evident regard to sensation, or will and perception.

" No especial organs appear to be required to give pleasure or pain, but such as are essential to the impression of sensation peculiar to any part. Thus fear is excited by the mind has been accustomed to associate with it, and the other passions and affections are excited in the same manner, by mental habit or association; for, in fact, all our feelings, are acquired, our bodily appetites being of the same nature. We never desire what is unpleasant, and never act when morally, that is, rationally, persuaded of the act, because incompatible with our welfare, we lose courage as long as we so think, however agreeable it might otherwise be. Pp. 36-38.

Again he says:—

" Phrenologists write as if they deemed an organ its own gratification. Desire is never felt without a consciousness of an organ, but then the individual being that is conscious of the instrument, is the subject of desire and gratification. The action of an organ, but of the soul, and although the action of a passion promotes the development of that part of

called into action, it does not follow that a full development shall lead to its full exercise—far otherwise—mind has a restraining as well as an exciting power. Even according to phrenologists, the large Destructiveness of Spurzheim, for instance, was controlled by his moral habits or associations, and yet many a man with larger moral organs (to speak phrenologically), and less Destructiveness, has been a murderer.\* What does this prove? Certainly not that a man's moral character is decided by the balance of his brains, but by the state of his soul as regards knowledge and affection.† Ignorance and evil habits are not measured by the callipers:

Dark thoughts and deeds to darken'd minds belong;  
He can't live right whose faith is in the wrong.

"There is but one willing power, however numerous may be the objects which excite it, and all that is necessary to call the will into action with regard to any object, is merely that it be furnished with organs of sense through which the soul may attend to it; the same organization being employed in attending to every variety of object, according as it may be visible, audible, tangible, so that an especial organization for every kind of sentiment and affection can scarcely be demanded, since it is not organization which confers sentiment, but the soul itself that experiences it in the use of the senses, according to association and its innate properties.‡ Thus with the very same order of organs, one man loves what another hates, not because the one is better formed for hating than the other, but because their mental habits are opposed in consequence of different associations.§ For the same reason, a man may avoid to-day that he eagerly sought for yesterday, not because his organs are altered, but because some fact or fancy has modified his impressions—he has the same brain, but different knowledge.||

"The rational soul is never practically divisible into three parts, animal, moral, and intellectual, for all our conscious voluntary acts involve all these divisions. Man submits to impulse or resists it according to the

\* Here Dr Moore attributes to the phrenologists his own want of precision, in making them say that Spurzheim's Destructiveness was "controlled by his moral habits or associations." What they really say is, that his moral and intellectual powers, strengthened by exercise and "habit," regulated the purposes to which he applied his Destructiveness, but did not eradicate the propensity itself from his mind. It might be much more true than it is, "that many a man with larger moral organs, and less Destructiveness, has been a murderer," without any detriment whatever to Phrenology.

† The truth is, that a man's moral character is decided chiefly by the form of his brain, except when the "balance" of its regions is a pretty even one. Nobody doubts the modifying influence of habit and knowledge on human conduct; but it is a momentous fact, that a great preponderance of the lower and posterior regions of the brain constitutes an insuperable obstacle to the formation of good habits, and to the reception of that kind of knowledge which tends to influence the moral character.

‡ Why are the "innate propensities" of one soul so different from those of another?

§ This is sheer assumption, and opposed to the fact that with certain forms of the organism, certain objects are found to be always loved or hated.

|| But what if his knowledge remain as it was?

since the interests of man. And I wish to shew  
of its professors, is, that though we think *with* the  
brain itself neither thinks, feels, nor wills. It is  
pre-arranged and co-ordinate relations between the  
organism of the brain, without supposing the existence  
is not derived from the brain, but which acts thro'  
merely in proportion to the size of the organ and  
but also according to convictions of truth, and by  
cies beyond the reach of our senses, and whose  
cannot estimate. Let the anatomist, the phrenologist,  
proceed in peace together. This, all Christians  
those who are not such, will find contention rather  
additional strife than to enlarge true knowledge.  
rel? We shall see more alike by and bye; and  
the more patient we are with each other. The phre-  
nologist properly divide her followers, but the more closely  
more nearly we shall approach each other; for all the  
belong to the same system, and, had we faith in the  
and mind, as all Christians profess to have, we shall  
the different radii of knowledge centre together.  
word of mine intercepts the smallest ray of that  
standing, may that word be blotted out for ever!"

The recommendation of a treaty of peace  
truth, is a most innocent proposal; but why  
in a philosophical work! Differing in spirit  
not necessarily quarrelling, and assuredly  
want of faith in Christianity. The real in-  
appeal is this,—“Leave me undisturbed in my  
views of mind and body, which I have not  
are sound and irrefragable.” With the assurance  
viction we have nothing to do, but public  
the gauntlet.

As the author has got quit of the embroil-  
ment and controversy, he returns to the



similar unhesitating theories. The supposition about the nervous currents is a perfect gem of the old school.

"The dizziness felt on ascending an elevation is a curious evidence of the combined influence of mental state with bodily sensation. It is generally supposed to depend entirely on impressions received by the eye; but Wilkinson, in his "*Tour to the British Mountains*," proves the contrary. A blind man ascended with him to the summit of one of the Cumberland mountains. To this person he described the fearful precipices visible on every hand, but he soon repented of thus exercising his picturesque discourse, for the blind man speedily fell to the ground, overcome with dizziness, and screaming out with apprehension of tumbling down the rocks into the abyss below. This blind man was Mr Gough, a highly philosophic and scientific man. The mind was here affected more powerfully than it would have been by the actual sight of what was described, because imagination exaggerated the picture, and enhanced the idea of danger. The same part of the sensorium was affected by the imagined sight, even more than it would have been by the real. The dizziness may perhaps be explained by supposing the mind to possess the power of altering or disturbing the nervous currents by which we are enabled to estimate time, motion, and distance. It is well known that when a man has been accustomed to ascend great heights, he loses the sense of dizziness, which can only arise from the difference in the state of his mind with regard to objects around him; he ceases to attend to them as he did at first, and his apprehension leaves him, as he learns to balance himself, and trust to his hands and feet, under an accommodating muscular action, without the usual help from sight, which we know is the medium through which we instinctively preserve our centre of gravity in standing and walking."—P. 232.

It would follow from these last words, that a blind man cannot preserve his centre of gravity in standing and walking; but the author often contradicts in one part of a page what he has said in another. Recent physiology has demonstrated the power of preserving equilibrium to be connected with a distinct or sixth sense, with an appropriate system of muscular nerves, as independent of the sense of sight as that sense is of it.\* Phrenology itself has not yet satisfactorily explained the *etourderie* which paralyzes the sense of equilibrium on heights and precipices. Several faculties seem to be concerned in it. Cautiousness is excited in apprehension, for there is little or no dizziness when the elevated person is placed in a well fenced place of safety. Weight, or the perception of gravitation, is disagreeably excited, producing often, as in motion at sea, a feeling of nausea; while Concentrativeness, which steadies the step of the rope-dancer, is too weak to restrain these painful feelings. The feeling of ease on heights is said to have been observed to correspond with the size of the organ of Concentrativeness. It is likely

\* *Phren. Journal*, vol. ix., p. 193.

and our minds whimsical and inordinate, or impelled at variance with what an enlighten-  
ment would dictate, we may suspect something wrong in the management of the body, which we must endeavour to rectify, if we would enjoy the highest advantageous existence;"—that "bodily inactivity and gloominess of mind and moroseness of temper in the open air promotes the better feeling and brightens the intellect with an inward satisfaction;"—"the minutest alterations in our physical condition correspondingly influence our mental state;"—and the case is founded in nature, both as it regards the mind, it can only be met and overcome on natural principles. Pp. 18, 19, 342, 364.

In chapter II, the author opposes Dr Wigan's theory of the duality of the mind. He remarks, that "we posterously imagine that each instrument of action is the organ of a distinct intelligence, when in fact an individual being uses all these means for the same end, feeling, and makes the body one by unity of action and purpose;"—and "although each side of the brain contains an equally perfect apparatus, yet, while the mind is in confusion, results from double action;" which the case were not both sides "controlled by the mind, he thinks, demonstrates its unity. All the voluntary muscles subservient to its purposes, feeling pain or pleasure according to the state of the organization." It ought not to be forgotten that Wigan uses the word *mind* not as synonymous with the faculties, to express merely "the aggregate of the mental faculties."

With the author's definition of the mind, it is evident that

as an educational guide. The passage immediately follows what we quoted above from pages 36-38.

"I dwell on this subject merely for the purpose of enforcing the importance of proper education; understanding that term to signify the use of the senses on suitable objects, under moral restrictions, and for the purpose of acquiring the habit of acting with the conviction of true knowledge and in wise or religious association with well-ordered agencies, since we see that moral evil is a reality, a disharmonizing power, which may actually be communicated from mind to mind, like a contagion that will subject the whole being to its laws, when once brought, in any degree, to yield to its influence. We find that provision is made in the brain and spinal marrow for sensation and motion. We have a medium of impression, with means for supplying nervous energy to the muscles; but both orders of nerves belong to a being whose prerogative it is to think on the ideas excited by sensation, and in consequence also to will, and to act through the body. It is evident, from this constitution of mind and nerve, that a healthy state of either can only be maintained by being afforded appropriate exercise. If one set of nerves, say those most employed in perception, be engaged too long, as in monotonous labour, it must be to the detriment of the reflective powers; and though a man thus occupied may become acute, as a savage in his limited department, in the use of his senses, he is likely to possess only the disposition of a slave, unless some moral truth which toil cannot obliterate has grown up in his heart from infancy. But those who have not enjoyed the advantage of early training into the facts of religious faith, must, under such circumstances, necessarily become mentally indolent and incapable of acting for their own futurity, except under brutal impulses, the stimulus of appetite, or the persuasions of the whip. And this is the state to which some men, without intending it, reduce their brethren, by forcing them to exhaust their entire energies in producing wealth for their employers; for thus they must be deprived of mental and moral education, that is, of all that constitutes the durable riches of a human soul."

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- II.—1. *An Essay on Separate and Congregate Systems of Prison Discipline; being a Report made to the Boston Prison Discipline Society.* By S. G. HOWE. Boston, U. S.: W. D. Ticknor & Co. 1846. 8vo, pp. 90.
2. *Prisons and Prisoners.* By JOSEPH ADSHEAD. London: Longman & Co. 1845. 8vo, pp. 320.

Both of these works are ably written, and supply much valuable information respecting the merits of what have been called the "Pennsylvania" and "Auburn" systems of prison discipline, but which Dr Howe more accurately denominates the "Separate" and "Congregate" systems. The essay of that gentleman has been elicited by the glaring par-

Messrs Charles Sumner and Horace  
with the view of rectifying this unseemly  
induce the society to adopt a report in  
the two systems should be fairly discus  
feated in this attempt, they have now ve  
to the public. "We question not," they  
the advocates of either system; we tru  
have tried to be honest, according to th  
dards; but it is unfortunate that our soci  
cretary, should have taken either side in t  
should have acted as umpire, and opened  
ports to the calm discussion of the mer  
each system. Instead of this, the zeal  
secretary, supported as they have been  
nexion with the society, which enabled  
whole time to the subject, have made h  
pion of his side."

The peculiar feature of the Auburn or  
is, that the prisoners are brought togethe  
companies, under prohibition to hold c  
each other by speech or signs; each, i  
a separate cell during the night. Under  
or Separate system, on the other han  
confined by day as well as by night to his c  
couraged, by the officers and benevolent  
read, and reflect. The latter plan has b  
Pentonville prison, and in many others ir  
dom, and on the Continent of Europe.

Dr Howe discusses the merits of bot  
spect to, 1. Security of the person of the  
ency to deter offenders from the commiss  
3. The reformation of the prisoner. H



moral sense and affections of the prisoner, and least to his fear and selfishness; and which is best adapted to maintain a kindly feeling between him and his keeper?"—"Evils of the severe labour exacted in the congregate prisons."—"Exhibition of the prisoners under the congregate system."—"The separate system prevents the convicts from being known to each other."—"Comparative value of the habits of industry under the two systems."—"Which system requires the least possible interference with the prisoner's actions, and leaves him the greatest degree of self-control?"—"Kinds of punishment used and admissible under the two systems."—"Which system offers the best means of adapting its discipline to the individual character of the prisoner?"—"Which can best adapt itself to his peculiar character in its appeals to his moral and religious nature?"—"The separate system is, for all moral and intellectual purposes, more truly social in its nature than the congregate system."—"Moral influence of visitors in bringing about a reform of the prisoners."—"Which system is most conducive to the physical health of the prisoner?" The author concludes that the separate system is the preferable one, though "we are far," says he, "from supposing that that system is perfect; on the contrary, we admit that no system yet adopted fully satisfies us."

The subject having been discussed in a former volume of this journal (xvi. 7), we need not enter upon it again at present. We may, however, suggest it for consideration, whether both systems might not be consistently employed in the same building. Might not the prisoner, after being subjected for a time to the influence of separate confinement and its accompaniments, be allowed to work during the day in the society of others who had undergone a similar discipline; and thus be made fitter to act a moral and industrious part in the world after his liberation? Again, might not the better class of prisoners be beneficially indulged with each other's society to a greater extent than would be proper in the case of hardened criminals? It is evident, however, that until means be adopted for enabling discharged prisoners to regain their character and place as free citizens, most of them will of necessity relapse into crime, purely for want of the means of earning an honest subsistence.

\* In a letter published in the *Daily News* of 16th April 1847, Captain Macnochie speaks of the separate system as follows:—"In its place and degree, I am well aware of its value; and for all untried and short-sentenced prisoners, and during a proportion also of the sentences allotted to graver offenders, no

At a time when the treatment and discipline occupying so much attention both in and out of the works before us can hardly fail to be examined. In comparing different prisons, a remark ought constantly to be kept in mind,—“that the best system may be so badly managed as to be inoperable, while another upon an inferior system administered by a man of great capacity as to produce the best results.” We find that, not only in prisons, but in the management of ships of war, and indeed wherever a number of men are employed, that chief always exercise a powerful influence upon the dispositions and conduct of every individual under their command.

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III.—*Remarks, Theoretical and Practical, on the Education of Idiots, and Children of Weak Intellect.*

Ph. D., Principal of the West of England Institution for the Education of the Deaf and Dumb. London, Adams, and Co. 1847. 12mo, pp. 128.

During the last ten years various attempts have been made in France, Germany, and Switzerland, to train the mental powers of idiotic and imbecile children. The success which has followed the persevering efforts of the benevolent men who have undertaken this difficult task, has been such as to hold out great encouragement to the continuance of their labours. Considerable has been attempted or achieved in this country, but Dr Scott, though relating only the experience of the West of England Institution, has given a more complete and accurate view of the subject than any other writer.

were not of so striking a character as those related, although such as have long impressed him with a firm belief in the feasibility of educating imbeciles." When we remember that, almost down to our own day, the condition of the deaf and dumb was supposed to be unimproveable, and consider how desirable it is that, in the analogous case of imbeciles, all that is possible should be done to render their lives agreeable to themselves, and to lighten the grievous burden of superintending and maintaining them, we shall heartily desire to see such endeavours crowned with success. "That we can elevate," says Dr Scott, "the imbecile of mind into eminence in anything, is not to be expected; but that they may be taught better habits, decent manners, and given obedient and improved dispositions, and made useful members of society, so far as performing the commoner occupations in life, is certain, in most instances where listlessness and the merest inert existence are now alone exhibited." At present the imbecile is usually cast off as incapable of improvement. "He is sent amongst the incurables, and, from the mere listlessness and inactivity to which he is doomed, the mental vacuity becomes more and more complete, until probably he dies the perfect moping idiot. For idiots who have the mental powers totally obliterated, it is not to be expected that anything can be done towards improvement; but this class of idiots is very small, compared with that in which *partial idiocy* only exists, and amongst the latter we have not unfrequently *some* powers of the mind, not at all below the common standard; though others may be very defective. Indeed, amongst the cretins of the Alps and Pyrenees, there is generally found an aptitude for some particular pursuits, while they exhibit in other things a complete deficiency of intelligence. In any system adopted for the education of idiots, it would be the first great object to seize upon those powers of mind least affected, and by giving them a proper direction, and by cultivating the others so far as they could be influenced, there would result a general improvement of the whole. There is but little doubt that the imperfect knowledge which has existed regarding the mental phenomena, and the vague generalities with which the investigators in this field of science have been content to rest satisfied, have tended to prevent all subjects connected with mind, whether in health or in disease, from becoming matters to be dealt with satisfactorily; for while the faculties of the human mind were treated of under such very general terms as confessedly has been the case with nearly all metaphysical writers; there is little surprising in the fact, that empirics have been as successful in their efforts in all matters con-

communicating to those of man ; and we might give names, and discourse regarding them ; yet we cannot consider the individuality of each particular with all the peculiarities which constitute the nature in which nature really exists, our science is not applicable for practical purposes. Since, however, we have arrived when the mental phenomena are connected with the organs through which they are manifested, we may expect that many problems long held to be insoluble in the science of mind will be solved. In our treatment of those of imbecile mind, the chief dependence is on the power of modifying the brain—through which the mind manifests itself. The details of Phrenology may be questioned, not the broad physiological fact, that the brain is the organ the mind employs ; and most physiologists admit this fact further, and believe that different portions of the mass are employed for different kinds of action."

In order to invigorate the feeble brain, we must bring it to action by every practicable means consistent with health, and thus gradually strengthened by exercise. We must keep in view that the circulation of the blood in these unfortunate creatures, and that the power of exciting and strengthening the bodily functions, and those of the brain in particular, is to be increased by the quantity and force of that circulation, and the quantity of supply of oxygen to the blood, by frequent gymnastic exercises, singing, shouting, and so forth. In short, over, every endeavour should be made to bring them out of the condition of passive recipients, and into that of actively observing and self-control.



and whole system, he will have exhausted most of the means at his command for effecting the object in view.

Commencing with the education of the limbs (in whose movements untrained imbeciles exhibit none of that nice adjustment and precision which ordinary persons acquire without any special teaching), M. Seguin by the use of gymnastics not only enabled the children to use their legs and arms with effect, but strengthened the muscular system, and cultivated that most valuable habit, the habit of obedience. The improvement which gymnastic exercises are calculated to produce was very soon apparent, and it was moreover found that these exercises had a very favourable influence in the development of the voice. During the second month, all the pupils except one learned to keep fairly the proper step in walking. They were also practised in running, carrying dumb-bells, and jumping. "M. Seguin invariably observed, in all of them, a great want of attention to what they were engaged in, and, as he remarks, 'though they *saw*, yet they did not *look* (observe);' and to educate this *look*, which was a 'feature amongst them so little in activity,' he had recourse to a method which he thought would be of considerably more influence in correcting it, than merely verbal directions, which had but little power on their inattention and giddiness. The instrument which he adopted was a *balance pole*, and which not only was useful for this purpose, but also served for muscular exercise. The pole was thrown by him, and caught by them, and again thrown by them to him, or to each other. This done rapidly, and often repeated, forced their attention—otherwise it would have fallen with some force against their legs." In a short time, most of them thus learned to throw and receive a heavy body. "They all *saw* better, and *looked* more attentively, than when the exercises were thus commenced." In selecting the means which he thought would be most successful in conveying to them intellectual impressions, he chose such as would address themselves more particularly to the organs of sight; "because," says he, "hearing is more passive than active, and the great point, before all, is to draw the idiot from the passive state in which he exists." In giving them notions of forms, he made use of pieces of wood cut into the shape of bricks. "At first all the pupils except one confounded the length, height, and width of the figure with each other, but, after a week's training, some of them were able to distinguish the different sides, and to place the various bricks as desired. After longer practice all the pupils except three became able to place the forms in their various combinations; these were often made to become

At the end of the first six months it  
stated by M. Seguin to have been pro

"1. I have developed and applied, and  
means have permitted, the muscular  
2. The nervousness and irritability of  
or sensibly diminished. 3. They have  
and begun different gymnastics, so as  
young persons. 4. They have learned  
throw, and carry burdens, the weight of  
strength of their age. 5. Five among  
to read, write, count to a certain limit  
hope that they could still be impr  
6. Their notions have become precise and  
have begun to form themselves, and to  
conduct and speech. 8. Obedience and  
both to be created, have begun to regu  
and of their existence. 9. Several are  
establishment to perform manual labours  
persons, and are employed to work in t  
ring the six months none of my childre  
ill, and the health of all is strengthened

For farther details we must refer to  
pamphlet. In concluding it he expres  
though the results of M. Seguin's labo  
aging, yet they are by no means what  
more careful and systematic arrange  
the pupils brought under instruction at  
he looks upon as indispensable to ensur  
gree of success. M. Seguin's pupils we  
to their sixteenth or seventeenth year  
tion was begun.

The want of spontaneous action of th

Scott, "that the strength of the impulse after any particular pursuit, or the will for its performance, will always be in proportion to the strength of the natural impulse of the faculties, or as the phrenologist would say, to the development [and activity] of the organ. In a Newton the desire or will would be strong after calculation, but only weak after results of painting or music; while in that of a Rubens or Titian it would be most powerfully manifested in objects of art. So genius displays so strong a power of will, that no obstacle can turn it from the objects of its pursuit, while weakness of mental character is shewn in the listless apathy that nothing can rouse. For ordinary minds, ordinary stimulus is necessary to rouse them to activity; and such are the generality of mankind. To those above ordinary minds less stimulus is needed, while to such minds as we are now considering, the strongest and most active agents can only excite in them that energy which is necessary to perform the lowest kind of mental action. But we must remember that just in as much as we have improved their minds in strength and activity, have we improved their wills; and in no case can we ever expect from an imbecile the energy of an ordinary mind, more than we should ever be able to change that mind into the intellectual greatness of a Bacon or a Newton. It is something, and that, too, not to be despised, if we can illumine the darkness of their intellectual night with the feebler rays of twilight."\*

The facts above mentioned are of great value in reference to education in general. *Whatever is useful in rousing, strengthening, and training the faculties of the imbecile, is still better calculated to bestow similar benefits on children more favourably constituted; and educators of every class may derive many useful hints from the experience of such men as M. Seguin.*

Of the style of Dr Scott's pamphlet it is impossible to speak so favourably as of its matter. We cannot help thinking, that if his arduous duties had allowed him sufficient leisure for revising and polishing his sentences, they would have exhibited fewer examples of incorrect and inelegant composition.

\* For an account of the endeavours of M. Voisin and others, in France, to educate idiots, see Chambers's Edinburgh Journal, 4th and 11th November 1843, pp. 334, 338; and 9th and 30th January and 13th February 1847, pp. 20, 71, and 105. We beg to direct attention also to Dr Twining's work entitled, "Some Account of Cretinism, and the Institution for its Cure on the Abendberg, near Interlachen, in Switzerland," (London, 1843); and to a short article on the subject in our seventeenth volume, p. 318.



### III. INTELLIGENCE, &c.

*Phrenological Class, London Mechanics' Institution.*—On Friday, the 21st of May, a public discussion on Phrenology took place in the Theatre of the Institution. The proceedings were opened by Mr Glanville, a member of the class, who gave a brief outline of the history and origin of the science, and an explanation of its principles. At the conclusion of the opener's speech, the chairman invited opposition; but, after a delay of a few minutes, no one rising for that purpose, another member of the class, Mr Haswell, gave a description of the action of the organs in groups, and their influence on the moral and social condition of mankind, and concluded with some remarks on the value of Phrenology as a philosophy of the human mind. The chairman again invited opposition, but without effect. Another member, Mr Mitchell, then rose and made some observations on the value of Phrenology as applied to the social arrangements of life; and observed, that some difference of opinion among the public must have taken place in reference to Phrenology, when, among so large an audience, no one could be found to oppose it. Several other speeches followed, but nothing particularly hostile to Phrenology was stated. Mr Richard Cull was present, and addressed the meeting. Mr George Wyld, an old member, presided on the occasion, and about 600 persons were present. The discussion lasted rather more than two hours, and may certainly be considered as a favourable symptom of the progress of Phrenology.

The following is a list of lectures for the current quarter:—June 7, Mr Glanville, On the anatomy of the brain—in conclusion; June 14, Mr Eason, On the evidences in proof of Phrenology; June 21, Mr Eason, Objections to Phrenology shewn to arise from an imperfect examination of its evidences; June 28, Mr Williams, On the metaphysical objections to Phrenology; July 5, Mr Greenwood, On the Drama phrenologically considered; July 12, Discussion on the best means of diffusing a knowledge of Phrenology; July 19, Mr Williams, On the educating influence of amusements; July 26, Discussion on the functions of several phrenological organs; August 2, Mr Haswell, On the application of Phrenology to criminal legislation; August 9, Mr Angell, On communism; August 16, Mr Glanville, On the physical conditions that influence human progression; August 23, Mr Angell, On the moral and physiological effects of smoking, drinking, &c.; August 30, Quarterly Meeting. Non-members of the class are invited to attend. It meets on Monday evenings in the class-room adjoining the reading-room.—D. O. HASWELL, *Hon. Sec.*

*Lectures on Phrenology.*—In April, the Reverend Henry Duff of *Loth*, delivered two popular lectures on Phrenology, in the Assembly Room there, to large audiences. The *Edinburgh Weekly Journal*, in noticing the second lecture, says: "The reverend lecturer, at the outset, regretted that the nature of the course limited his illustrations and remarks to two lectures, when the subject, to do it justice, would have required at least a dozen. Making allowance for this fact, he embodies an immense number of discoveries and results bearing upon the history and utility of the science, regarding the various temperaments of individuals, which explain and enlighten what was hitherto obscure and dark in the page of Phrenology. Mr Duff was very lucid, and occasionally eloquent, and, at the close of the lecture, received that meed of applause which his gratuitous services, in aid of an infant institution, so much deserved."—Since our



last publication, Mr Donovan has delivered a course of six lectures, to large audiences, in *Chester*, where he has also had two classes, of ten and seven pupils respectively, for instruction in his system of manipulation. According to the *Chester Courant*, of 28th April, "Phrenology seems, indeed, to have taken strong possession of the walled city of *Chester*. It is gratifying to have to record the fact, that, so far from abating in public estimation, these lectures are engrossing a continually increasing interest, an interest evinced by the regular attendance of those (members of the clergy included) whose presence bears witness to the talents and powers of the lecturer. We understand that the class which has been formed under his management includes several of the most respected and intelligent inhabitants of our city." The following advertisement appears in a subsequent number of the same paper:—"At a meeting of the *Chester phrenological class*, Henry Brown, Esq., in the chair, held at the *Mechanics' Institution*, on Monday, the 10th of May 1847, the following resolution was proposed by Dr Davies, and seconded by Dr Willmott:—"That we present to Mr Donovan a copy of the works of Sir Humphrey Davy, as an appropriate testimony of our entire approbation of the manner in which he has communicated to us his method of manipulating the head, which method we believe to be entirely original, and eminently successful."

*Varieties.*—The April number of the *Edinburgh Medical and Surgical Journal* contains an article entitled "Contributions to the Pathology of the Brain, by Robert Boyd, M.D., Resident Physician to the Parochial Infirmary, and Physician to the Pauper Lunatic Asylum, St Marylebone." He makes the oft-repeated and true observation, that "the connexion between symptoms and organic lesions in cerebral diseases has ever been one of the utmost difficulty and obscurity. The severest symptoms have occurred without commensurate, or, indeed, any structural change being discovered; and, on the other hand, extensive disease has been found without any or (with) but slight symptoms." In the same number are published the Report of the Committee appointed by the Bengal Government to examine the mesmeric experiments and surgical operations of Dr Esdaile; and a paper by Mr Braid of Manchester, entitled "Facts and Observations as to the Relative Value of Mesmeric and Hypnotic Coma, and Ethereal Narcotism, for the Mitigation or entire Prevention of Pain during Surgical Operations." On the main points, Dr Esdaile's cases are favourably reported on by the Committee, who, however, as is shewn in the last No. of *The Zoist*, have not displayed too much candour on the occasion. The Government Secretary's letter to the Committee acknowledging the receipt of their Report, is published in *The Zoist*. He says—"So far has the possibility of rendering the most serious surgical operations painless to the subject of them, been, in the opinion of the Honourable the Deputy-Governor of Bengal, established by the late experiments performed under the eye of a Committee appointed for the purpose, as to render it incumbent on the Government to afford to the meritorious and zealous officer by whom the subject was first brought to its notice such assistance as may facilitate his investigations, and enable him to prosecute his interesting experiments under the most favourable and promising circumstances. With this view His Honour has determined, with the sanction of the Supreme Government, to place Dr Esdaile for one year in charge of a small experimental hos-

pital in some favourable situation in Calcutta, in order that he may, as recommended by the Committee, extend his investigations to the applicability of this alleged agency to all descriptions of cases, medical as well as surgical, and all classes of patients, European as well as native. Dr Esdaile will be directed to encourage the resort to his hospital of all respectable persons desirous of satisfying themselves of the nature and the effect of his experiments, especially medical and scientific individuals in or out of the Service; and His Honour will nominate from among the medical officers of the Presidency, 'Visitors,' whose duty it will be to visit the hospital from time to time, inspect Dr Esdaile's proceedings, without exercising any interference, and occasionally, or when called on, report upon them, through the Medical Board, for the information of Government. On these reports will mainly depend what further steps the Government may deem it expedient to take in the matter."—The sudden death of the Rev. Dr Chalmers on 31st May, at the age of 67, has excited a deep sensation throughout Scotland. His brain was examined by Dr Begbie, and is said to have weighed 50 ounces 2 drachms, which is less than seems to have been generally expected. It is further rumoured, that the skull was of unusual and very unequal thickness, that the *sulci* between the convolutions were remarkably deep, and that Dr Begbie will read a description of these and the other post-mortem appearances before the Medico-Chirurgical Society of Edinburgh, after which it will no doubt be published. We have endeavoured to obtain, in the meantime, authentic and detailed information about the brain and skull, but without success; and shall, therefore, offer no remarks till after the publication of all the particulars.—Another recent event of still more wide-spread interest, is that of Daniel O'Connell. A newspaper says, "The general magnitude and expression of power manifested in the head of O'Connell have been frequently noted and commented upon. In the letter addressed by Dr Miley to Mr Morgan O'Connell, informing that gentleman of the death of his father, the Rev. Doctor says—'We have had a cast taken of his head, which has filled with wonder the physicians who have seen it.'"—On Tuesday evening, 20th April, a few of the phrenological friends of Mr D. G. Goyder entertained him in the Thistle Tavern, Glasgow; Dr Hunter in the chair. After some preliminary and loyal toasts, the chairman rose and made a few highly complimentary remarks upon Mr Goyder's abilities as a lecturer and teacher of Phrenology, and begged to present him, in the name of his friends assembled, with a purse of gold, as a small but substantial token of their esteem for him as a phrenologist, and as an acknowledgment for his valuable exertions in the propagation of this eminently useful science. Mr Goyder made a feeling and appropriate reply, in which he mentioned the high gratification it had given him to learn that such men as the brothers Combe, Mr R. Cox, &c., had contributed to the very handsome testimonial with which he was now presented, and had thus acknowledged his humble services in the diffusion of truths which he deemed to be of the highest importance to mankind.—Then followed an able address by Mr D'Orsey upon the light which Phrenology throws upon education. He gave a lucid explanation of the present Government scheme, which, although not quite as phrenologists would wish, yet, he believed, was the best that could be adopted in the present state of the national mind.—Several toasts were proposed by Drs Hunter and Weir.

and the other gentlemen present, and the enjoyment of the evening was kept up with great spirit till about half-past eleven, when the meeting separated.—Dr J. G. Millingen has just published a volume on “Mind and Matter; illustrated by Considerations on Hereditary Insanity, and the Influence of Temperament in the Development of the Passions.”—Dr G. Calvert Holland has in the press a work entitled “The Philosophy of Animated Nature, or the Laws and Action of the Nervous System.”—Speaking of inward blindness, Coleridge says—“Talk to a blind man—he knows he wants the sense of sight, and willingly makes the proper allowances. But there are certain internal senses, which a man may want, and yet be wholly ignorant that he wants them. It is most unpleasant to converse with such persons on subjects of taste, philosophy, or religion. Of course, there is no reasoning with them; for they do not possess the facts on which the reasoning must be founded. Nothing is possible, but a naked dissent, which implies a sort of unsocial contempt; or, what a man of kind dispositions is very likely to fall into, a heartless tacit acquiescence, which borders too nearly on duplicity.”—The *American Phrenological Journal* continues to run a vigorous course, and seems to have attained a large circulation. In last January number, we find the following paragraph:—“We are informed by Mr Walker, recently from Buenos Ayres, that there is a phrenological professorship endowed in the college of that city, to which is attached a valuable collection of phrenological specimens.”—Dr Campbell, in a communication published about a year ago in the *Northern Journal of Medicine*, states that he has been informed by Dr Kombst, that at Jena, in the Grand Duchy of Weimar, a large number of idiots and deformed individuals are to be found. This fact is, by the medical men of the place, coupled with the circumstance of there being brewed at Lichtenhain, a neighbouring village, a very strong beer of pleasant taste, which is a great favourite with the inhabitants of Jena. This beer is very intoxicating, and the state of intoxication produced by it is far more violent than that brought about by any other beverage in common use. These highly intoxicating qualities of the Lichtenhain beer are ascribed to belladonna, which it is said the brewers mix with the beer. Now, no day passes without some of the inhabitants of Jena returning home in the evening highly intoxicated; and the idiotic and deformed children are supposed to be the offspring of fathers who begot them in a state of intoxication, produced by the beer of Lichtenhain.—On 8th June 1847, a report by M. Royer Collard was read before the French Academy of Medicine on a paper of M. Baillarger, entitled, “Statistics on Hereditary Insanity.” The conclusions which M. Baillarger had come to were the following:—Mental derangement is more easily transmitted from the female than from the male parent; it is more frequent, and is propagated to a greater number of children. The madness of a mother is more to be feared for her daughters than for her sons; madness of a father, on the contrary, is more readily handed down to the sons. Maternal insanity is not transmissible to sons in a greater degree than madness of a father; it is, on the contrary, more to be feared for daughters. The reporter expressed the approval of these doctrines by the commission, and moved the thanks of the academy to the author. The report was adopted.

*The Skyey Influences.*—Though in vigorous health, I am habitually affected by the weather. I never indulge in gloomy thoughts; but resolutely turn away my gaze from the lone stubble waving in the autumn



wind, and think only of the ripe, golden seed which the sower will go forth to sow. But when to the dreariness of departing summer is added a week of successive rains; when day after day, the earth under foot is slippery mud, and the sky over head like grey marble, then my nature yields itself prisoner to utter melancholy. I am ashamed to confess it, and hundreds of times have struggled desperately against it, unwilling to be conquered by the elements, looking at me with an "evil eye." But so it is—a protracted rain always convinces me that I never did any good, and never can do any; that I love nobody, and nobody loves me. I have heard that Dr Franklin acknowledges a similar effect on himself, and philosophically conjectures the physical cause. He says animal spirits depend greatly on the presence of electricity in our bodies; and during long continued rain, the dampness of the atmosphere absorbs a large portion of it; for this reason, he advises that a silk waistcoat be worn next the skin, silk being a non-conductor of electricity.—*Mrs Child's Letters from New York.*

*Books received.*—The British and Foreign Medical Review, for April.—The Zoist, for April.—Select Writings of Robert Chambers, Vol. I., II., III., and IV., post 8vo. Edinburgh: W. & R. Chambers.—Annual Report of the Royal Edinburgh Asylum, for 1846.—Do. of the Cumberland Lunatic Asylum, Dunstan Lodge, Gateshead-on-Tyne, for 1846.—Vestiges of the Natural History of Creation, cheap edition. London: J. Churchill.—The American Phrenological Journal, 7 Nos., from Nov. 1846 to May 1847.—The Morningside Mirror, Vol. II., Nos. 4, 5, 6, 7.—The New Moon, Nos. 29, 30, 31.—Howitt's Journal, No. 14.—The Medical Times, weekly.—The American Journal of Insanity, Vol. III., Nos. 2 and 4.—Fourth Annual Report of the Managers of the New York State Lunatic Asylum, Feb. 1847.

*Newspapers received.*—Coventry Herald, April 16, 30.—Glasgow Argus, April 22.—Chester Courant, April 28.

*To Correspondents.*—The extracts from Swedenborg are of little value; but we are not the less obliged to "A Lady" for sending them.—We regret that it is not at present in our power to comply with the request of "A Quondam Old Subscriber."—"Anti-Theory" makes too little allowance for differences of taste among the readers of this Journal; and, moreover, seems to have overlooked the second half of its title.—Although this Number contains 24 pages *extra limites*, we are again compelled to postpone Mr Hytche's essay.—The Sheffield Phrenological Society's Report, and Mr Jones's clever exposure of Mrs Hamilton's phrenological quackeries in London, are in type, and will appear in our next.

Communications for the Editor (prepaid) may be addressed to Mr ROBERT COX, 25 Rutland Street, Edinburgh. Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall, & Co., Stationers' Hall Court.—Articles intended for the next following Number must always be with the Editor *six weeks before the day of publication*. Communications for the section of "INTELLIGENCE," and also Advertisements, should be in hand at least a fortnight before the same day. Charges for Advertising:—Eight lines, 6s.; twelve lines, 7s. 6d.; every additional line, 6d.; half a page, 14s.; a whole page, 25s. Advertisements may be sent to the publishers in Edinburgh or London.

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OCTOBER, 1847.

NEW SERIES.—No. XL.

**I. MISCELLANEOUS PAPERS.**

- I.—*Thoughts on the Relation of Physiology to Psychology.* By  
THOMAS HUN, M.D., Professor of the Institutes of Medi-  
cine in the Albany Medical College.\*

I propose to shew the connection between the Physiology of the nervous system and Psychology, and to establish the distinction between them. For want of attending to this connection, psychologists have lost sight of an interesting face of their science; for want of attending to this distinction, physiologists have fallen into great confusion, and have been led into many absurdities and contradictions.

Physiology and Psychology embrace phenomena of different orders, and which are learned by different means. Hence they may be distinguished from each other. These two orders of phenomena are connected together, and, to a certain extent, are mutually dependent. Hence the two sciences have a point of contact, and it is important to examine this point, and see how they touch without becoming confounded.

By means of the five senses, we become acquainted with the external world. We find a substance having extension, figure, impenetrability, colour, and exhibiting certain changes or movements, called phenomena. This substance, which is external to us, which possesses these properties, and exhibits these phenomena, we call *matter*, and these properties and phenomena, we call *material*.

Our knowledge of the properties and phenomena of matter, and of their relations, constitutes physical science, or rather the physical sciences, for there are several. The divisions of the physical sciences depend on the differences in the proper-

\* Extracted from the American Journal of Insanity for July 1846, vol. ii., page 1.

*matter*, so we say that these latter phenomena belong to the internal world, to a substance called *mind*.

It is true, that it is by consciousness that we are made acquainted with the impressions made on the five senses, so that, ultimately, all our knowledge of the external world is a matter of consciousness. In this case, however, we are conscious of impressions made on us from without, and which are irresistibly referred to something external to us, and between which and us the senses have served as a medium; while in the case of the phenomena of thought, will, &c., we are conscious of what takes place directly in us, without any reference to the external world.

The man who should shut up his five senses, and endeavour to find the external world, *matter*, by his consciousness, would be guilty of an absurdity; for consciousness does not reveal to him this external world, except through the medium of the senses. So the man who should neglect his consciousness, and endeavour to find the internal world, *mind*, by his five senses, would be guilty of a like absurdity. It is true, that by the senses he might find the external manifestations of mind, but of the phenomena themselves he could have no idea without consciousness. When I see a man gesticulating in a certain manner, I conclude he is angry, not because I see his anger, for I see only his gesticulations; but by my own consciousness I know what anger is, and how it manifests itself externally in me. Had I never been angry myself, I might have known that a man in certain circumstances would execute certain movements, but I never could have an idea of anger.

Since, then, the phenomena of thought, will, feeling, &c., occurring within ourselves, and learned by consciousness, are real, they may be studied, analyzed, and their relations may be discovered; that is, they may form the basis of a science; for, to constitute a science, it is only necessary to have phenomena having fixed relations to each other. Psychology is the science which takes cognizance of the mind and its phenomena, as Physical science takes cognizance of matter and its phenomena.

To resume. There is, then, an external world of matter, the properties and phenomena of which are learned by the five senses, and the knowledge of this world constitutes Physical science. There is also an internal world of mind, which is revealed to us by consciousness, and the knowledge of this world constitutes Psychology. The domain of Physical science is, then, the *external world*,—*matter*. The domain of Psychology is the *internal world*,—*mind*.

of metaphysics, of which the solution is the present purpose. The great point is, that mind as we know it, is difficult to know. If, in the progress of science, mind is to disappear, I doubt not that it will swallow up matter, and not the other way.

I have now shewn the distinction between Physiology and Psychology; I proceed to shew the connection.

Physiology is a branch of physics, which treats of the phenomena of organized matter, the means of the senses, and which even our own bodies are recognised as belonging to. The phenomena relate to nutrition and reproduction, and not to any confusion; but when we consider animal life, or of the nervous system, we must proceed with great caution, if we would avoid any confusion. Physiologists have been, and still are, in the habit of doing so.

The phenomena of consciousness, perception, and volition, are, in many cases, perhaps in all, connected with movements in the nervous system. These movements do not constitute, psychologically, a distinct place although we do not know their exact nature, and are always very different from any movements as occurring in this system. If accompanied by some movement or change in the position of the grey matter of the cerebral cortex, we can conceive that this movement or change is a conceivable change in this matter, and not in the mind.

der, cognizable by consciousness. That it should be accompanied by a material movement as its cause or its effect, is a fact which we may attempt to prove; it bears no absurdity on its face; but that it is this material movement is an assertion so absurd that common sense at once rejects it.

We have now come to the point of contact between Psychology and the Physiology of the nervous system—to the confines of the material and spiritual world—and we must proceed in our investigation with caution.

Let us take the case of a sensation, analyze it into its elements, and see what belongs to matter, what to mind.

I lay my hand on the table, and feel it. This is a sensation. This sensation is a mental phenomenon: so little apparent connection has it with matter or a nervous system, that many persons experience such sensations all their lives, without knowing that there is a nerve, or what it is. But we can demonstrate that besides this sensation, this mental phenomenon, there are material movements without which it cannot occur. Thus, if the nerve is divided, no sensation occurs when the impression is made on the hand; and, by a series of investigations, we find that an impression has been made by the external object on the extremity of one or more nervous fibres, that this impression has travelled along these fibres to some point in the interior of the brain which cannot be determined in the present state of the science, and when it has reached this point, the sensation is produced. Here are two things, a nervous transmission and a sensation; the first a material, the second a mental phenomenon. The nervous transmission causes the sensation, but is not the sensation; it is analogous to the transmission of electrical currents along wires. Suppose now that an electrical current, in its passage, finds a combustible matter, it will set it on fire. Here the current causes the combustion, but it is not itself combustion; so nervous transmission causes sensation, but is not sensation.

Suppose we could make the change which occurs in the nervous fibre, or in the grey matter into which it plunges, obvious to the senses, and then, that we lay bare the parts in a living animal and excite this movement, and say to a spectator, "Look at this movement, change, whatever it may be; *this is sensation you are seeing*;" would it not appear absurd? Would not the man thus addressed, say, "It is impossible for me or any other person to see or feel in any way the sensation of another animal; I see a nervous movement, and that may be the cause of the sensation: but the sensation itself can only be felt by the patient; it is a matter of con-



writers on the reflex action of the  
whom talk of sensations of which the  
conscious, will agree with me as to the  
physiological language, and, it may be  
on this point.

If we take the case of a voluntary  
same elements entering into its pro-  
order. We have the volition, a motion  
upon nervous fibres in the brain in  
where sensation is produced, cannot  
tainty; the impression here made,  
fibre to the muscle or muscles, and  
succeeds. Here the mental phenom-  
enon, instead of following it, as in

Volition is so manifestly an act of  
voluntary action, that physiologists have  
considering volition as a property of the  
would be the same propriety in it, as  
in sensibility.

Not only is it true of sensation as  
connected with certain nervous motion  
or effect, but the same thing appears  
in mental operations. Various facts, well-  
known to all physiologists, demon-  
strate that sensations are under the influence of the  
will and are perverted or suspended when  
the will is diseased or destroyed. Still we  
must mind the distinction between the ner-  
vous and mental operations, at the same time  
admitting the connection.

As to the mode of the connection be-

tended, *matter*, found it impossible to frame even an hypothesis of their mode of union, and in a kind of philosophical despair, resolved it all into a miraculous effort of God, a *divine assistance*. Leibnitz invented his hypothesis of the *pre-established harmony*, according to which the nervous movements and the mental operations correspond, but without any relation of cause and effect. Imagine two parallel movements, one occurring in the nervous system, and the other in the mind, and so arranged that they shall always correspond in time, and you have the view of Leibnitz of the mode of union of the soul and body. Hence, when I execute a voluntary movement, it is not the volition which causes the movement in the nervous fibre, but this movement occurs at the same time with the volition; and so sensation occurs in the mind at the same moment that the impression is made on the nervous fibre.

Others, again, seeing that so long as this duality was admitted, no explanation of the reactions of mind and matter could be possible, have endeavoured to get rid of it. Some have denied the existence of mind, and have made thought an attribute of the substance matter. These are the materialists. Others have made matter only a mode of manifestation of mind. These are the spiritualists. While a third class have endeavoured to find a third term which should include both matter and mind. Such, for example, is the system of Spinoza.

It is not necessary for physiologists, nor even for psychologists, to attempt the solution of these problems of transcendental metaphysics; problems which are so vast, so difficult of solution, that no one metaphysician has as yet been able to seize more than one of their faces. For practical purposes, we have a task more humble, but more easy. We have to study, not the nature of the two substances nor the nature of their relation, but this relation itself, as it manifests itself to the senses and to consciousness. The great questions for us to answer are these: What nervous movements correspond to given mental acts? What is the mechanism of these movements? and, How are the mental acts affected by changes in the nervous system or in the rest of the body? Without undertaking to explain how an impression transmitted along a nervous fibre gives rise to a sensation or is accompanied by a sensation, we study the different elements necessary for the production of sensations, and the modifications of sensation produced by changes in the nervous fibre. So of the other mental operations. We cannot explain how it is that the instincts or the intellectual acts should be con-

criticism ; but to him at least belongs  
conceived thus clearly the problem of the  
ters of fact.

To resume. The Physiology of the  
braces all the facts in relation to the mor  
which occur in the nervous matter. It  
cognizable to the five senses, and uses th  
vestigation as the other physical science.

Psychology is the science of mind. It  
of consciousness which are not cognizabl  
embraces all the mental operations, whic  
from changes in nervous matter ; and  
not merely a chapter of Physiology, but a  
pendent science.

But there is a connection between nerv  
mental acts, the nature and mode of whic  
study of the facts relating to this connec  
physical and spiritual nature, constitutes  
which the physiologist and psychologist m  
gist must come from the exclusive study of  
ness, in order to understand many of the  
they are subjected ; and the physiologist,  
movements, comes at last to facts of con  
comprehension of which he must look to

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## II.—*On the Source of Love of the Past.* By

Although it is probable that most of the  
ties of the mind have

in the investigation of unexplained phenomena, it is requisite that much caution should be exercised ; for how often do we find hypothesis confounded with observation, and how frequently are principles considered to be settled which are derived from a too limited or insufficient range of facts. It becomes, then, the duty of the phrenologist not to present any novel view for consideration, unless the evidence be maturely considered, and its truth have been tested by prolonged inquiry. When, however, any truth is so discovered, its promulgation equally becomes a duty ; seeing that every fact in cerebral physiology is a step in advance, and must illustrate or correct former impressions. With this view I shall proceed to indicate the reasons which lead me to believe that there is a faculty which derives as much gratification from clinging to the past, as that of Hope gleans from regarding the future. I shall, moreover, endeavour to shew that no known faculty is equal to the generation of the past-loving impulse ; and supply such evidence as appears to indicate the site of the organ.

In the tenth volume of the *Phrenological Journal* there is a paper by an anonymous writer, who endeavours to shew that admiration of the past is a distinct primitive emotion, and as such possessing its appropriate cerebral organ ; the portion of brain situate between the back of Ideality and the front of Cautiousness, and which is indicated on the Edinburgh bust by a "!", being the site named. That an organ is localised in the portion of brain referred to, is undeniable ; for the region has been found defective when Ideality and Cautiousness were large, and well developed when those organs were deficient. The writer, however, did not support his opinion so much by an appeal to cerebral fact, as by a reference to the evidence which is derivable from consciousness. Having been led to conceive that the well-known tendency of many persons to linger on the bygone and its memorials, was not referable to any ascertained organ, I was induced to examine the locality assigned as its seat, and the results of this investigation were communicated\* to the phrenological public. Mr George Combe, who previously intimated that he was disposed to attribute the evolution of emotional sublimity to the unascertained organ, replied† to the paper, and presented some evidence tending to overthrow the position. The antagonism of so able an observer, of course, led me to renew the investigation ; and, after research which has

\* *Phrenological Journal*, vol. xi., p. 284.

† *Id.*, vol. xi., p. 412.



ment, the strength of its manifestation is governed by the general organs. Some persons linger over past scenes with the past, whilst others view the past with indifference. In the mode of manifestation, some are affected by general history, others by individual history, and others by records which illustrate the more tangible. In nations as well as individuals, the same development may be traced. The affection is more centred on the future; the British, with their past, are more engrossed by the practical, whilst in China it would be deemed a waste of time to glean the philosophy of government at the expense of gone ages.

A question then arises, Is the emotion of Veneration is it but one of those modes in which the mind is manifested when excited into intense activity? or is that Veneration is not competent to originate, for, as its very essence consists in simple contemplation of an object brought within its grasp, it cannot dwell on the past more than on the future, and must be engrossed by the present. If, then, the mind is fixed to cling to the past, the bygone must be contemplated by Eventuality; whereas the emotion of Veneration displayed in an intense love of the past, is irrespective of the facts or the events which it is accompanied. Besides, there are cases where the emotion is large without the manifestation of the mind; and other instances where, though the mind is deficient, a tendency to linger on the bygone is regarded as the chief mental characteristic.

If it be said that love of the past arises

not because they are bygone, but simply because they are events; and not only does it not concern itself whether they are joyous or gloomy, but it can scarcely offer any opinion respecting their comparative value, such comparison being within the jurisdiction of the reflecting organs. Now, the mere existence of an emotional clinging to the past implies a widely different impression; giving an affirmative opinion where Eventuality is neutral. Dwelling as it does on the past, *because* it is the past, it prefers this to the present, because it perceives nothing but beauty therein. Hence we frequently encounter persons who, though deficient in the organ and power of Eventuality, shew that love of the past is their intensest passion. From the defective Eventuality, however, they are devoid of lucid cognisance and arrangement of incidents, and the past is characterised by a haze in which different events are intertangled as in a dream.

Previously to dilating on my own view, I shall notice that entertained by Mr Combe, namely, that the unascertained organ is the source of emotional sublimity.\* Having met with several persons in whom the region was largely developed, but who did not manifest any conception of sublimity, I cannot concur in that opinion. Again, from the facts which have fallen under my notice, I am led to believe that sublimity is a compound emotion, the product of the organ called "Wonder;" acting in conjunction with Cautiousness and Ideality; the former organs conferring a sense of mystery and awe, and the latter superadding a pervading, yet undefinable beauty. In saying this, I of course merely refer to *emotional* sublimity. For there are various kinds of sublimity, although the radical emotion be the same. Thus the most common is that originated by a view of grand scenery, or the imaginings of a John Martin, in which perception is a principal ingredient; and the noblest and rarest springs from that enlarged and catholic benevolence which made John Howard visit unheedingly the pestilent dungeons of Europe, and teach the great lesson that the worst criminal, though fallen, was still a brother. I would then venture to suggest that, in Mr Combe's cases, the powerful sense of sublimity was not derived from the unascertained organ, but from large "Wonder," Cautiousness, and Ideality, co-existing with a tendency to dwell on the past, in some *one* of the varied modes wherein the emotions can be manifested.

Another view has been indicated by the late Dr Maxwell, which, however, as it will be seen, is not so much opposed

\* System, 5th edition, vol. ii., pp. 477-8.

case, in order to convey some idea of the general result of the operation of this organ.

A. C. dwells, as it were, in the past. It is scarcely possible to refer to any subject which does not suggest vivid reminiscences of bygone days; and old scenes, old playmates, and the very playground of her childhood, being thus recalled, become as palpable realities. She dotes on antique furniture, and old china—especially such as tends to remind her of past events in her history; and her collection of worn-out relics excites many a smile in the observer. Marked, however, as is her love of the past, its strength cannot be ascribed to her childhood having been pleasurable; it was a season of acute mental trial, and she readily allows that, as respects the external sources of happiness, past days permit of no comparison with the present. But she intimates that, “notwithstanding past trials, bygone days still cleave to her memory, and neither the present nor the future can yield such unmixed delight.” In A. C. the region between Cautiousness and Ideality is largely developed, being, indeed, larger than either of those organs. The organ of Veneration is only full, and reverence is not a prominent feature in her character. The sense of sublimity is likewise defective.

Similar cases have been collected by other phrenologists. The correspondent of the *Phrenological Journal* before referred to (vol. x., p. 672), after mentioning the coincidence of feeling and development in himself, proceeds as follows:—“I examined the head of an intimate friend also, whom I know to be disposed to the feeling; in fact, he was the only person whom I had known whose mind sympathised with my own in this respect: in him I found that part of the brain also largely developed.” Mr Prideaux, in his *Speculative Analysis of the Mental Faculties*, thus relates a similar case: “I have now before me the cast of the head of a gentleman, which I took in consequence of the unusual development of this organ which it presents. I am intimately acquainted with this individual, and, during a long intimacy with him, have never heard him utter a single expression which would induce me to suppose that he was much affected by the sublime, but quite the reverse. His Veneration is not by any means large, and I believe him to possess less than an average endowment of the feeling; he, however, possesses a more than ordinary disposition to dwell on the past. I have heard him say that he never passes a day without looking back to the events of his past life; and he has observed to me, that he has often noticed that, whilst he was particularly fond of recurring to, and conversing on, the incidents of his

conclude, that these manifestations, in  
belong to another organ, for which a sit  
in a space heretofore unmarked in the b  
mitive function may be defined as a lo  
the past, as Hope is a love of, or regar  
(Vol. ii., p. 146.)

I need scarcely intimate that these ca  
a view to decide the controveray, but n  
the evidence which has been collected to  
sition that, on the organ marked " ? " de  
past. The feeling, however, is not one  
scure ones which it is difficult to trace, b  
character, and illustrations of the emot  
circle, every phrenologist has the oppor  
accuracy of the deduction. Whilst, the  
evidence is too striking to permit the id  
incidence, I willingly leave it to be teste

When collecting facts to illustrate t  
organ, it is desirable to examine classees  
quality is a prominent feature. Thu  
Tone, it is desirable to inspect the hea  
whom, as a class, the organ attains to  
and we can then descend to those who  
musical judgment. In pursuance of this  
mined the heads of those persons who c  
who were addicted to archæological p  
unascertained organ was more or less p  
veral the organ of Veneration was four  
here remark, that antiquaries are not n  
rative character,—that, indeed, it is a p  
sume that their love of facts and object  
tory springs mainly from Veneration.



lated. So also Hone, the able illustrator of the manners and customs of "olden time," and who has done more than any other author to make us familiar with the every-day life of our forefathers, gave very little evidence of the operation of Veneration. Such being the case, I think it is proved that a tendency to the study of antiquity is referable, not to Veneration, but to a love of the past.

In farther confirmation of the position, I may appeal to the casts of Robert Owen, Rammohun Roy, Austin, and Joseph Hume. In each of these busts, the organ is more or less defective, and the very name of each suggests the idea of energetic opposition to customs and laws which have no other sanction than antiquity. Our collections supply many illustrations of the converse case. Thus the organ is found large in the head of Dr Parr, whose greatest delight was derived from developing the merits of the heroes of Greece and Rome. Of Bonaparte we are told by Las Casas, in mentioning a conversation in which "the Emperor was speaking of his early days when he was in the artillery, and of his companions at the mess," that "he always delighted in reverting to these days." In his mask there is a fulness of the unascertained organ.\* In most of the casts of criminals, the region is deficient, like the organs of all those sentiments which tend to withdraw men from the absorbing power of the immediate. But in the bust of Courvoisier, the organ is well developed, and his letters to his relatives testify how forcible were his impressions of childhood,—forming, as they did, pictures to his imagination upon which he dwelt with an abiding interest, such as could not be dulled by the sense of guilt, and its coming punishment.

Literature supplies many illustrations of the existence of a love of the past—be it considered as a simple or as a complex emotion; especially the portion devoted to lyrical composition. It has been said by a profound philosopher, "Let me indite the popular ballads, and I care not who frames the national laws." Now, without ascribing too much influence to popular songs, there can be no doubt that they usually express the moral condition, and give utterance to the wants and opinions, of a nation. I should therefore be inclined to doubt the existence of any sentiment to whose gratification no lyrics were found to minister. Thus in love-songs we have the utterance of Amativeness and Adhesiveness; in war-songs, of Combativeness and Destructiveness: lyrics like the

\* Is strong love of the past quite consistent with the innovating career of Napoleon?—ED.

few illustrations may here be presented. Pope was trammelled by conventional  
bid fear he evinced of being accounted  
how powerful must have been his love  
find him intimating in his correspondence  
regard for an old post which stood  
house wherein he resided when a youth  
his eccentric *Confessions*, bears witness  
the impulse ; especially where he states  
possession of his apartments at Annecy  
find beneath the window a small spot  
resembled a grassy plot before the place.  
Of James Smith, co-author of the *Recess*  
recorded, that he visited yearly the locality  
that he delighted to trace any spot which  
and to describe it as it formerly appeared.  
boyish glee he recounted the follies of his  
as a last illustration, I may refer to one  
organization of society—De la Mennais  
for a political offence, he wrote as follows  
towards the reminiscences of my infancy  
nothing,—Brittany is present before me  
of my life. Not a blade of grass, nor  
not a single movement of animated nature  
I now live in it all ; and have made to  
it, to which I retire during the evil days.  
Such, then, is but a sample of the illusions  
have been given of the influence of the  
developed ; and the self-relying character  
language has been cited forbids the strong  
strong admiration of the past sprang  
Veneration.\*

to morbid or violent activity. How often during sickness have we found, that whilst present objects have been powerless to interest the feelings, our thoughts have been so concentrated on the past, that events which had been forgotten for years became as vivid as when they first transpired ! So if we listen to the utterances of the dotard, we find that he cares for nothing but the scenes of his boyhood, and talks of nought but what he did when a child.\* De Quincey, whilst suffering from the physical and cerebral derangement caused by extreme opium-drinking, says, that the "minutest incidents of childhood revived, clothed in all their evanescent circumstances." Sir William Ellis records a striking case wherein the operation of the past-loving emotion acted as a powerful remedial agent. He says,† that "W. R., a female about 40 years, had been insane for some years. She was a very robust woman, and, being usually in a state of excitement, was the terror of all the patients. If at any time a softened influence could be produced, and more gentle feelings called forth, it was by referring to the scenes of early life. One day, when under these impressions, a patient began a song which she had heard when a girl ; when, turning to my wife, she said with great animation, 'Mistress, when I was young I knew that song, and I think I could sing it now.' She began, and with the greatest delight found she remembered the whole of it. From that hour, her excessive violence gave place to the more amiable and kindly feelings : instead of being the dread of all about her, she became obliging and industrious, and, after some months of trial, she got well and returned home."

When describing the functions of an organ, we are compelled to select illustrations in which the prominence or deficiency of the quality is well marked ; and hence the aggregated result will include much more than we usually find in any individual. I mention this, because by some misconception I have been supposed to imply, that where the unascertained organ is largely developed, love of the past must of necessity be manifested in *every* possible mode. Now, love of the past is a mere sentiment, and, as such, is governed by the same laws as regulate the action of other emotions. Veneration, for example, supplies the reverential feeling,

\* These appear to us to be purely intellectual phenomena, in no degree referable to increased love of the past. In aged persons, the memory of recent events soon fades, while impressions made in youth retain much of their original vividness.—ED.

† Ellis' *Insanity*, p. 223.

and a cleaving to them as the pre

A few instances will indicate the organs in modifying or directing the prevalence of Inhabitiveness and enthusiasm to the scenes of childhood. When the organs be added a large development of youth become prominent, and are regarded as of much less importance. Acquisitiveness, Size, and Form, it is to store the cabinet with specimen musty tomes, and other antique objects. Adhesiveness, there exists an excess of friends; when with large Form, Size, a burning admiration of ancient sculptures, and a sensibly delightful perception of its beauty. Modified, then, as is the feeling, and by the greatest variety in the mode of expression, still find prominent and reigning such the past as yearns for all that can make reminiscence more vivid.

Although it is too early to generalize, we arrive at the philosophy of this faculty. It has been observed and sketched correctly, and hence may perhaps be deduced. From the facts above detailed, I am then led to conclude that the province of this faculty is to convince of this organ is to generate an action distinguished from a reflective—claiming thereby preclude the undue progress of the past thus acts as a modifier of whose province it is to



the present ;" yet the phrase " too much" obviously confines the axiom to those who, by abusing the feeling, find in precedent a sanction for present evils. An admiration of the past, indeed, seems essential to the effectual progress of society ; for, as the past is but a microcosm of the present, but with the superadded advantage that we can trace events through their several stages of development, it is obvious that lessons may be derived therefrom which shall preclude retrogression. Now, though the philosopher would deduce this lesson without any impulse pointing in the direction of the past, yet, as the majority have been characterised by obedience to impulse rather than to reason, it is clear that the possession of an instinctive love for the past—simply *because* it was the past—would be of no mean service in precluding disregard of that portion of wisdom with which it is imbued. Conservative, then, as is the Love of the Past, like every other faculty it ministers to human improvement ; for, by developing the value, it preserves the due influence of the past, and prevents that too rapid advance which can only end in retrocession.

There is scarcely any occasion to indicate the minor uses of this sentiment. Its refining influence is very great. Taking the average of men, they are as much humanised by looking backwards as by looking forwards ; and if the embruted can be led to retrace the days of buoyant health, of innocence, unworldliness, and ardent aspirations after the true and the beautiful, he must for the time become a less selfish, and a better man. It was this feeling, too, which, when the Eastern Empire fell, rescued the relics of Grecian art and literature as the most precious of treasures ;—thus preserving a mine of golden thoughts, whose influence is for all time.

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III.—*A Contribution on the Philosophy of Induction, considered in Relation to the Intellectual Faculties of Man.* By Mr RICHARD CULL.

Aristotle unfolded the principles of deduction. He taught us when, where, and the extent to which, inferences may be drawn from data, and thus to descend with safety and certainty from principles to their consequences and applications. Bacon taught us the system of induction. He has shewn us that the only sound method of ascending from facts and common experience to principles successively higher and higher, is

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The laws of motion and the law of  
by induction, are briefly expressed,  
and applications have occupied the  
the whole of their lives, of some of  
men of science. Euler, Lagrange, L  
devoted themselves to tracing the  
ton's laws, and upon which, indeed, t  
wonder, then, is, not that the philosop  
layed so long, but, on the contrary, t  
and when so few successful induction  
found in Bacon's time.

nounce that the whole of natural philosophy depends upon true inductions. Aristotle thought that his system would go far to equalize the natural talent of different men in the act of reasoning. Bacon says:—"Our method of discovering the sciences merely levels men's wits, and leaves but little to their superiority, since it achieves everything by the most certain rules and demonstrations."\* Aristotle displayed the requirements of conclusive deductions; he wrote the grammar of deduction. Bacon directed the way to arrive at true propositions by induction. Although the grammar of induction is yet to be written, still we hail Bacon as a guide from facts to generalizations,—from sense to thought. Bacon leads us upward to principles; Aristotle conducts us downward to their consequences and applications. And guided by the two philosophies, our feet are fully illumined in the undulations of the path of research, with a light, which gives a steadiness of step and a confidence in our career, that was before unknown.

I shall endeavour to describe the process of induction, and consider it in relation to the faculties of the human mind. I refer those who are familiar with the physical sciences to the literature of those sciences for the last two hundred years, in order to gather for themselves a knowledge of the generalizations, classifications, and inductions which have advanced those sciences. Those who are less acquainted with the sciences may consult Tenneman's *Geschichte der Philosophie*, Degerando's *Histoire comparée des Systèmes de Philosophie*, Compté's *Cours de Philosophie positive*, Thomson's *History of Chemistry*, Professors Playfair and Leslie's *Dissertations on the Progress of Mathematical and Physical Science* in the *Encyclopædia Britannica*, and Professor Whewell's *History of the Inductive Sciences*,† for that purpose. As authorities on the inductive method, I refer to Bacon's *Novum Organum*, Sir John Herschel's *Discourse on the Study of Natural Philosophy*, Professor Powell's *On the Connexion of Natural and Divine Truth*, Professor Whewell's *Philosophy of the Inductive Sciences*, and his *Mechanical Euclid*.

The terms "Inductive Philosophy" and "Inductive Reasoning" are synonymous, and are adopted in two senses, one of which is general, and the other is particular.

\* Bacon's *Novum Organum*, Book i., Sec. 122.

† Professor Whewell's book is misnamed; it is not a history of the inductive sciences, but a history of the principal inductions in certain sciences. It is, however, a valuable book, and forms an excellent introduction to his work on the Philosophy of the Inductive Sciences.

ever, exhibit them. We now seek to form a general proposition which shall express thus much knowledge. We cannot affirm that "all transparent solids exhibit periodical colours by exposure to polarized light." We can, however, assert, that "all bodies which exhibit periodical colours on exposure to polarized light are solid and transparent." This proposition is not an induction, it is only a generalization by enumeration of particulars. It is merely a collective assertion of what is already asserted *seriatim* of the individuals.

I add another illustration. The planet Mercury revolves around the sun. The planet Venus does the same. The planet Mars, and the rest of the planets, do the same. We seek to express thus much knowledge in a general proposition. We, therefore, affirm that "all the planets revolve around the sun." Now in this generalization there is no induction. There is simply a collective assertion of what is already asserted *seriatim* of each planet. It is generalization by enumeration. The planets Mercury, Venus, Mars, &c., which are all the planets, revolve around the sun. There is no new truth brought amongst the facts, but simply a reassertion in another form of the already as fully asserted truth. It is an economy of expression that we have gained. And this general expression,—this formula,—simply embraces and expresses the class of separate facts which it was intended to comprehend.

In the process of generalization, as illustrated in both instances, we have studied the individuals in a *part* only of their nature, that part in which they obviously resemble each other, and we have withheld our attention from the other parts. And we have united them so far as they agree, in a formula which expresses that agreement.

I proceed to another, a superior generalization. We have collected together a number of individual facts, which we have economically expressed in a general proposition, that "all the bodies which exhibit periodical colours by exposure to polarized light are solid and transparent." We are now desirous of knowing *what* transparent solid bodies exhibit those colours. We, therefore, examine and make a list of such bodies as exhibit them, after the manner of Lord Bacon's instances of heat, and thus obtain a large group of substances which are bound together by this common property. The individual substances of this group present great varieties of form, size, weight, colour, hardness, texture, and chemical composition. The manifestation of periodical colours being an optical property of the solids, we determine to examine them in relation to their other optical properties. We



do so, and find that they have one point of agreement, viz., the property of double refraction. And continued investigation shews that all double-refracting substances exhibit periodical colours by exposure to polarized light.

Now, as Sir John Herschel remarks, if observation had enabled us to establish the existence of a class of bodies possessing the power of double refraction, and an entirely independent series of observations had grouped together a class of bodies which exhibit periodical colours in polarized light, a mere comparison of the two lists would at once have shewn their identity.\* In the generalization, then, that "all double refracting substances exhibit periodical colours by exposure to polarized light," there is no induction, but simply a declaration of the identity of two groups of bodies. The proposition announces that the group of bodies which agree in one character, agree also in another.

These generalizations are laws of nature. They are formal laws, or laws of phenomena. The first asserts that a certain *effect* takes place when certain bodies are submitted to the action of polarized light. The generalization is, however, silent as to the *cause*. The varied phenomena of creation are effects resulting from causes, which act according to fixed and constant rules. And these rules are named Laws of Nature.

ton. In order to account for the production of the phenomena, Newton proposed the emission theory, which is, that light is actual matter emanating from luminous bodies, and which satisfactorily explained the phenomena then known. As our knowledge of phenomena extended, and new facts were discovered, it was found that the emission theory alone could not account for them. The conjecture of Huyghens was revived by Dr Thomas Young, and applied with singular ability to the elucidation of the fringes of shadows and other phenomena which stubbornly resisted explanation on the emission theory. After immense labour and great opposition,—for men clung to the emission theory apparently because it was Newton's,—Dr Young established the undulatory theory of light. This theory explains facts which the other could not; and newly discovered facts have hitherto found their places within the theory, as if it had been constructed with a view to include them.

The two elements required for the construction of a science are the Phenomena on the one hand and the Mind on the other. And these elements must be rightly brought together. The mind must be properly applied to the phenomena to convert them, by observation, into facts. The collected facts must be generalized and classified, which is accomplished by seizing on some common resemblance amidst their many diversities. There is yet no induction. The mind, besides all this, must be able to originate an idea which shall be appropriate to the facts, not deduced from them, nor even suggested by them in the way that points of resemblance suggest a generalization, but excogitated from the mind. The idea is a general idea, it includes the facts, and hence it is occasionally spoken of as a generalization.

I shall now select some examples of induction, as treated by Professor Whewell in his *Mechanical Euclid*.

The inductive principle, that all liquids gravitate, includes such facts as—

“(1.) Water falls in air as solid bodies do.

“(2.) A bucket of water held in air is heavy, and requires to be supported in the same manner as a solid body.

“(3.) A bucket of water held in water appears less heavy than in air, and may be immersed so far as not to appear heavy at all.

“(4.) A lighter liquid remains at rest above a heavier, as oil of turpentine upon water.

“(5.) The bodies of divers, plants, and other organized bodies, though soft, are not compressed or injured under a considerable depth of water.

“The different effects (2) and (3) led to the doctrine that all the elements have their *proper places*, the place of earth and heavy solids being

lowest, of heavy fluids next above, of light fluids next, of air next, and that the elements do not gravitate when they are in their proper places, as water in water, but that water in air, being out of its proper place, gravitates, or is heavy. In this way also (1) and (4) were explained.

"But it was found that this explanation was not capable of being made satisfactory, for (6) a solid body of the same size and weight as the bucket of water in (3) gave rise to the same results; and these could not be explained by saying that the solid body was in its proper place.

"These facts can be distinctly explained, and rigorously deduced, by introducing the *idea* of *fluid pressure*; and the *principle* that water is a heavy fluid, its weight producing effects according to the laws of fluid pressure.

"For, on this supposition, (1) and (2) are explained, because water is heavy, and (3) is explained by the pressure of the fluid upwards against the bucket, according to propositions 11, 12, 14.

"Also, it may be shewn by experiment, that in such a case as (4), the lighter fluid increases the pressure which is excited in the lower fluid.

"Facts of the nature of (5) are explained by considering that an equal pressure is exerted on all parts of the organized structure in opposite directions, such pressures balance each other, and no injury results to the structure, except, in some cases, a general contraction of dimensions. If there be a communication between the fluids within the structure and the fluids in which it is placed, those pressures are exerted from within as well as from without, and the balance is still more complete.

"Also all the other observed facts were found to confirm the idea of fluids considered as heavy bodies exerting fluid pressure: thus it was

element has its proper place,—is not an induction. It is a statement of what is observed, as may be seen on reference to the facts. Now the idea of fluid pressure, consisting as it does of the combined ideas of solid pressure and fluidity, is not what is observed, but is an idea in advance of the facts, and distinct from them. It is difficult, after once knowing an induction in connection with its facts, to sever that connection and consider the facts alone, and without reference to it. The induction seems so natural to the facts, and so uniformly recurs to the mind along with the facts, that we deem them to be the same. Indeed, we can scarcely now see any difficulty in originally making the induction. It seems as if the idea must start into the mind on the first knowledge of the facts.

From the fundamental idea of fluid pressure in connection with certain stated facts, we obtain the principle, which is an Inductive principle, that water and other liquids have weight in all situations. I proceed to cite another inductive principle, which is dependent on the idea of fluid pressure, viz., that *air has weight*.

"The facts included in this induction are such as the following:—

"(1.) We, existing in air, are not sensible of any weight belonging to it.

"(2.) Bubbles of air rise in water till they come to the surface.

"(3.) If we open a cavity, as in a pair of bellows, the air rushes in.

"(4.) If in such a case air cannot enter, and water can, the water is drawn in; as when we draw water into a tube by suction, or into a pump by raising the piston.

"(5.) If a cavity be opened, and nothing be allowed to enter, a strong pressure is exerted to crush the sides of the cavity together.

"If facts (1) and (2) were explained at first by saying that the *proper place* of air is above water; that when it is in its proper place, as in (1), it does not gravitate (as was said of water), but that when it is below its proper place, as in (2), it tends to its place; the facts (3) (4) (5) were explained by saying that *nature abhors a vacuum*.

"But it was found by experiment—

"(6.) That water could not, by suction, or by a pump, be raised more than 34 feet; and stood at that height with a vacuum above it.

"(7.) That mercury was supported in a tube with a vacuum above it, at the height of 30 inches (Torricelli's experiment).

"(8.) That at the top of a high hill this column of mercury was less than 30 inches (Pascal's experiment).

"These facts overturned the explanation derived from nature's horror of a vacuum; for men could not suppose that nature abhorred a vacuum less at the top of a hill than at the bottom, or less over 34 feet of water than over 1 foot.

"But all the facts were distinctly explained and rigorously deduced, by



adopting the *idea* of fluid pressure, and the *principle* that air has weight, its weight producing its effects according to the laws of fluid pressure. This will be seen in the deductive propositions which we shall demonstrate as the consequences of assuming that air has weight.\*

"The inductive proposition was further confirmed by—(9) experiments with the air-pump; for it appeared, that as the receiver was exhausted, the mercury in the Torricellian experiment fell."†

Lecturers on natural philosophy devise their experiments as examples of facts comprehended under, and, therefore, as illustrations of the truth of the several principles which are derived from generalization and induction. Thus the principles, that water and other liquids have weight in all situations, and, that air has weight, are stated first, and then illustrated by experiments.

That cause which produces, alters, or destroys motion, or which tends to do so, is called Force. We perceive motion, and may consider it without reference to its cause; thus, we can perceive that undisturbed motion is rectilinear. Motion is an *effect*. We see the motion of a billiard ball, but we cannot see the force which produces the motion. Force is a *cause*, and therefore it is not an object of perception. The idea of force involves the conception of Body or Matter, for matter is the subject on which force acts, and which exhibits the phenomenon of rest or motion, according as the force of resistance is equal or unequal to the acting force. Now the clear and distinct *idea of force* is the basis of the whole science of Mechanics.

In studying the motion of a body, as that of a billiard ball, the idea beyond the perception, and which is superadded by the mind, is the idea of force. This idea is an induction. The term Force is applied to designate a number of distinct causes,—as Pressure, Inertia, Momentum, Force of Cohesion, Magnetic Force, Chemical Force, &c. Each of these terms designates a cause. The definitions of force, which are given by writers on mechanics, are intended to describe, as accurately as they can, the fundamental idea of force producing rest, and also of force producing motion. The science which treats of force producing rest is called Statics; and that which treats of force producing motion is called Dynamics. When the force producing rest acts on fluids, the science is called Hydrostatics; and when the force producing motion acts on fluids, it is called Hydrodynamics.

The definitions in a science are intended to assist the stu-

\* These deductive propositions in the Mechanical Euclid follow this one.

† Whewell's Mechanical Euclid, Book 2. Hydrostatics, Proposition xxvi.

dent in forming the fundamental conceptions on which the science is built. And when those conceptions are formed, a number of elementary truths appear with them. When the conception of Force, as Pressure, is distinct in the mind, the elementary truths of Statics, which are stated as axioms, are assented to at once, just as the axioms of Euclid are assented to, when clear conceptions of the ideas belonging to the definitions are formed.\* “Some persons may be disposed at first to say, that our knowledge of such elementary truths as are stated in the axioms of statics and hydrostatics, is collected *from observation and experience*. But in refutation of this I remark, that we cannot experimentally verify these elementary truths, without assuming other principles which require proof as much as these do. If, for instance, Archimedes had wished to ascertain by trial whether two equal weights at the equal arms of a lever would balance each other, how could he know that the weights *were* equal, by any more simple criterion than that they *did* balance!”† And when those common notions (axioms) of the subject-matter in question are obtained, the mind, taking them as necessary truths, forms them into propositions, from which it deduces conclusions. So that the induction of force upon the phenomena of motion, occasions the conception of a number of truths (axioms) to arise in the mind on the subject of force, and these axioms become the data of conclusions.

In my paper on the Philosophy of Deduction, it was shewn that the premises contain the conclusion from which it—a new truth‡—is evolved by an act of the mind named reasoning.§ In the process of Induction, the new truth arrived at is not contained in the facts, but, on the contrary, the new truth contains the facts. I avoid calling the new truth—the induction—a conclusion, because it is not a conclusion in the sense of one in logic. And I avoid calling it a generalization, as it is not one in the sense in which mere generalization is adopted. Bacon called the process of obtaining a new truth by induction, an *interpretation* of facts. Dr Thomas Brown terms it *Relative Suggestion* (Lect. 46). Dr Reid calls it the exercise of the inductive principle of the human mind.||

\* What we call axioms, Euclid calls *Κοινὰ ἴσθητα*, common notions, i. e., notions common to man.

† Whewell's *Mechanical Euclid*, Remarks on Mathematical Reasoning, sect. 40.

‡ If the conclusion be not a new truth, as some assert, then Euclid contains no other truths than the axioms.

§ *Vide* p. 243 of this volume.

|| Reid's *Inquiry into the Human Mind on the Principles of Common Sense*, chap. vi., sect. 24.

in an eminent degree, a clearness of  
to the subject in question, and who  
in a vigorous and distinct manner, &  
exact observations."\* We have no  
the cerebral endowment of those in  
pective sciences was, in connection  
those clear ideas on the subject-m  
We know nothing of the cerebral de  
des, Galileo, Stevinus, and Newton.  
medes laid the foundation both of s  
He introduced to the facts which we  
*ideas of solid pressure and fluid pr*  
clear and distinct. And until the tin  
vinus, no other writer appears to ha  
distinct ideas of pressure.

In order to ascertain what mental  
idea of pressure, we must clearly asc  
consists; and, first of solid pressure,  
ception of a solid rigid body, and als  
acting on that body. A rigid body  
applied at one part is transferred to  
tive positions of the several parts of  
ble of change, as when we push open  
When any number of forces, that,  
body, would cause it to move, act simult  
so that no motion results from the  
each other, and the body remains in  
thus acting are called pressures. In  
tain effect of heavy bodies at rest. I  
guishable from all other effects, such  
figure, &c.

The idea of solid pressure, then, is



tion of force is obtained from motion,—it is the *cause* of motion, and is, therefore, conceived by Causality. The conception of one force acting on a body, and being neutralized by another force acting on the same body in an opposite direction, is the simplest notion of pressure; and for this notion Locality, Eventuality, and Causality, appear to be required.

The concurrent activity, then, of several organs, is necessary for obtaining this complex idea of solid pressure. We have perception, conception, and the abstract conceptions of causation, in combination with a previous knowledge of motion and comprised in a former induction of force as the cause of motion,—all combined to produce the idea of solid pressure. Thus, the mechanical idea of solid pressure is not a mere perception of phenomena on the one hand, nor a mere conception of the understanding on the other, but is a combination of both. The phenomena of motion are perceived, and the induction of force is made. The phenomena of solid rigid bodies at rest are perceived, and by aid of the former induction of force, the new induction of solid pressure is made.

It is, perhaps, impossible to ascertain the precise part which each organ plays in making the induction of solid pressure. It is evident, however, that Causality plays an important part. And the elementary truths which occur to the mind while the idea of solid pressure is distinct and clear, and which are expressed as axioms in statics, seem to shew that Causality is an important element in the main idea. Those axioms are all statements of what *effect* certain forces (*causes*), acting under given conditions, will produce. And such propositions can be affirmed and assented to by Causality alone.

The idea of fluid pressure includes the conception of a fluid body, and of two or more forces acting on that body. A fluid body is one whose parts are moveable amongst each other by the application of very small forces, and which, when pressed in one part, transmits that pressure equally in all directions to every other part. Fluid pressure, then, is a certain effect of fluids at rest. And this effect is distinguishable from the effects of fluids in motion.

The idea of fluid pressure, then, is a complex idea, and is the result of the activity of several organs. The essential mechanical character of a fluid is the mobility of all its parts, which is perceived by certain perceptive organs. Individuality conceives matter or body, which is thus mobile. The conception of force is obtained from motion; it is the cause of motion, and is, therefore, conceived by Causality. The



If Aristotle had asked himself the distinct question, Can a mechanical effect be produced by a geometrical cause? no doubt, he would have been puzzled as much as we are to conceive a *geometrical* cause, and he might then have sought after an appropriate cause.

The idea of causation is manifested by the cerebral organ named Causality. This organ conceives a certain cause, that is, a power or efficacy in operation producing motion, and which is named Force. We perceive the sequence of phenomena which occur, and Causality conceives that they *must* occur. We perceive only a few instances in which they occur; but Causality affirms that, under similar conditions, they must *necessarily always* occur. Causality steps beyond generalization to universalization. Causality enables us to state certain elementary truths of forces, with as clear an idea of their universality, as we possess of the geometrical ideas of space, or the arithmetical ones of number. And thus the mechanical sciences are founded on certain universal and necessary truths in the domain of causes.

In this contribution, I have endeavoured to point out the nature of induction, as a process distinct from generalization. I have selected for illustration those instances of induction which occur at the threshold of physical science, and one of which is the basis of that mighty fabric—modern astronomy. I have shewn the conceptions which constitute the idea, and endeavoured to point out the mental faculties whence those conceptions flow. But, in order fully to discuss the philosophy of induction, it is necessary to study examples of induction selected from every division of our knowledge; and in that study many questions arise, such as,—Is a belief in the uniformity of nature connected with inductive reasoning? Whence flows that belief? Is analogy the ground of antecedent probability? Whence flow the fundamental ideas of the several sciences? These, and many other questions, require investigation, as connected with, if not a part of, induction. The present contribution, then, so far from exhausting the subject, merely introduces it. A careful study of the progress of Science, especially of her inductive steps, is necessary for rightly estimating the intellectual characters of those great men in science to whom we are so much indebted. We must ascertain the condition in which Archimedes, Galileo, Kepler, Newton, and Gall, found and left science, in order to know for *what* we are indebted to each. The result of two thousand years' observation and study of celestial phenomena, was an accurate knowledge of

flaw in the inductions contained in those doctrines. Yet they denounced the method of investigation as opposed to right inductive reasoning, and the doctrines obtained as unphilosophical. They then exerted all their power to put down the doctrines; and thus, probably without knowing it, evinced a spirit similar to that of the enemies of Galileo. Their virulent and unscrupulous opposition failed to put down the doctrines, but it retarded their reception. Young's doctrine, the undulatory theory, is established. And Gall's doctrine is established, and become the science of PHRENOLOGY.

#### IV. *Thoughts on Capital Punishment.* By GEORGE COMBE.\*

In the *Scotsman* of the 9th and 30th May and the 13th June 1846, a series of articles appeared on "The Use of Capital Punishment;" and as they embodied in a clear, calm, and logical form, an able defence of the existing practice, I beg to offer some remarks in reply to them. The articles bear the signature M., and, for the sake of brevity, I shall refer to them under this designation; but it is proper to say, that they were not written by Mr Maclaren, the editor of the paper.

M., then, "entirely lays aside all claim on the part of society to inflict vengeance" on criminals; but he agrees with Beccaria, that "the true end of all punishment should be to prevent others from committing the like offence." This last we consider to be an erroneous principle. It is discussed, and in our opinion refuted, by Mr Hurlbut in his *Essays on Human Rights*, p. 23. M. resolves the right of society to punish, into "the right of self-defence"—coupled with which, he says, "it is a high and important object, also, to promote the reformation of the criminal." In these propositions I cordially agree with him. After stating that we are bound to select "*the best protection to innocent life*" (which also is granted), he proceeds in these words—"Taking human nature as it actually exists, and applying a rule which is to be operative not merely on this or that eccentric individual, but upon the congregated thousands which make up a nation, the terror of a sentence of *death* will operate more to restrain, than the terror of any other punishment. There is, in truth, something like the universal consent of all mankind—at least of all unsophisticated men—to this position." If this proposi-

\* This article has been more than a year in our hands, but could not be conveniently inserted in any previous number.—ED.

When a reflecting medical practitioner reads a statistical report of deaths from disease in a great city, and perceives that those from consumption exhibit the same proportion to the population year after year, what conclusion does he draw ? It is—that in this population a certain number of individuals have lungs too weak to withstand the injurious influences of the climate and other noxious agencies which assail them. The reason why *all* do not die of consumption is, that *some*, the great majority, have lungs that *are capable* of withstanding these influences. Those who die of other diseases may have other vital organs weaker than their lungs ; but in them the lungs, at all events, have been sufficient to resist the hurtful circumstances to which they have been exposed. Now, when we find in the statistical reports of any nation, the same number of robberies, the same number of murders and other crimes, recurring year after year in the same number of people, as long as their circumstances continue the same, does not the conclusion follow that there are, out of the whole population, a certain number of individuals whose moral qualities are not sufficiently strong to resist the temptations to crime presented by their external circumstances ? In short, does not this shew that it is only a *class* of society which is predisposed to crime ? In no other way can we explain the *uniformity* of the numbers of criminals while the circumstances continue unchanged.

an undue deficiency in the native power of the moral or the intellectual faculties, or of both. This fact has been demonstrated so thoroughly by evidence recorded in this Journal and in other phrenological works, that I do not stop to repeat the proof. I need scarcely add, that this combination does not *necessarily* produce crime as a specific result, but only causes strong impulses towards animal indulgences, accompanied by weak powers of restraint, in consequence of which the individual is unable to resist the temptations presented by his external circumstances.

Keeping in view, then, the causes of crime, we proceed to inquire into the relation in which *punishment* stands to them. If I am correct in saying that these causes consist in natural predisposition, and the influence of unfavourable circumstances, it is obvious that *punishment does not tend directly to remove either*. This will probably be admitted by the advocates of death-punishment; but they may reply that they punish offenders with death in order to deter other persons from offending. Let us consider, then, the relation which this proceeding bears to the object in view, viz., deterring other men from crime. I beg, again, to base my argument on an illustration.

Suppose two young men to have weak lungs, and both to be told that if they indulge in late and protracted convivial entertainments, and often pass from the heated atmosphere of a tavern into the chill air of a December night, they will certainly die; and suppose, farther, that in one of them the appetite for pleasure is moderate and the reflecting and prudential faculties are strong, while in the other this mental combination is exactly reversed—would the physician's threat of death have the same influence on both? Obviously not. The former would be deterred by it, while the latter would either disbelieve in it, or recklessly disregard it. These are not fanciful cases, but pictures of realities which may be verified by daily observation. The lesson which they teach is, that (other things being equal), the fear of death, as a motive restraining from hurtful indulgence, operates in the *inverse ratio* of the force of the temptation.

This process of reasoning is strictly applicable to the case of crime. In the criminal mind, the love of pleasure (which may take the form of sexual indulgence, of intoxication, of idleness, of ostentation, or of any other vice), must be *plus*, while the moral or intellectual powers, or both, must be *minus*, otherwise he could not become a criminal. The more intensely powerful the desire of immediate unlawful enjoyment is, and the feebler the moral and intellectual faculties



the offences is very nearly the same in both periods), we might with some degree of plausibility conjecture that the punishment of death had, in these instances, been absolutely inoperative either for good or evil. Apparently, evil-disposed persons committed the same number of offences, whether they incurred the penalty of death or not. These returns, at all events, support the proposition that the punishment of death does not stand towards crime in the relation of a preventive; for fewer offences were committed after it was abolished than when it was enforced.

Do I mean, then, it may be asked, to propound an absolute impunity for crime as the result of this reasoning? Certainly not; and I shall therefore proceed to mention the treatment which I propose. Before doing so, however, let me say, that the punishment of death appears to me to be *immoral* as well as unnecessary. Death with torture is now universally disused; and the punishment inflicted is simply the extinction of life ignominiously. Little importance attaches to the ignominy as a deterring influence; *1st*, because the mind that will brave death itself, will not be much influenced by the attendant circumstances; *2dly*, because, by destroying life, the consciousness of ignominy and of every other emotion is extinguished; and, *3dly*, because the same amount of ignominy, if it were necessary, might easily be inflicted without the accompaniment of death. Simple death, therefore, remains as the staple of the punishment. Now, by the ordination of God, we are all under the sentence of death. The clergy admonish us to bear it habitually in mind, and to prepare for it; the warrior is praised for disregarding it; and the philosopher glories in resigning himself to it with cheerfulness and equanimity: and I ask, On what principle, consistently with these views, can its infliction be justified *as a punishment*—as the most terrible of calamities—as that which is to restrain the reckless, excited, daring villain, after he has become insensible to all other earthly motives? He may tell the jury which convicts him, and the judge who condemns him, that *they* also are under sentence of death, and that the brief space of time which will elapse between the execution of the sentence on him and them, is no very formidable consideration to his disadvantage. Such a remark would be justified by religion, supported by philosophy, and sympathised with by men of courage who were neither religious nor philosophical. How, then, I again ask, *can* we reconcile such heterogeneous modes of viewing the most important event of our mortal existence? If all who should not be put to death for crime were naturally immortal in this world, I could understand the consistency of

opinion, be safely abandoned. But this is quite different from proclaiming *impunity* to crime. Society is clearly entitled to defend itself against the criminal acts of its evil-disposed members, and also to *use the best means* of defence. But the best means of defence are those which go most directly to the root of the evil. Let us at once deprive the offender of the power of repeating his criminal acts; let us withdraw him from all excitements to new transgressions; and let us train him to industry, morality, and religion. The application of these means, in the form of imprisonment, attended with rigid discipline, and protracted for a longer or shorter period according to the inveteracy of the evil habit which we seek to subdue, will prove at once *the most efficacious punishment* for crime, and *the best defence* of society, which can be attained, *until society shall amend its own institutions.*

To this doctrine it is often objected, that by such treatment we shall render criminals more comfortable than the destitute but virtuous poor, who are left to struggle with the last degrees of physical destitution and mental depression, unaided by the hand of beneficence, and uncheered by the voice of hope. In reply I beg to remark, that the possession of the dispositions which enable the poor in such circumstances to abstain from crime, places them far above envying the criminal, although he were lodged and fed in a palace. The deprivation of liberty and the stamp of disgrace which degrade the criminal, are felt by well-constituted minds as evils more poignant than the bitterest pangs of hunger and cold; and it is from this cause that the virtuous poor are not seduced by the apparent comfort of the criminal in prison. He *does not appear* to them to be in a happy and enviable condition. It is an erroneous idea of the rich that they view him in this light. If their mental conformation be so low that they feel no regard for their own character, and set no value upon their liberty, they will, by that very moral constitution, be prone to become criminals, irrespective of the supposed seductive pleasures of a jail. If their minds be well constituted, they will abhor a prison, *because it is a prison*; just as a poor but virtuous woman loathes a brothel, although its inmates may appear to her to be wallowing in luxury and wealth.

But there is another answer to the objection. If the rich, against whom, chiefly, criminal acts are directed, neglect their own duty towards the poor, and leave them to grow up in ignorance, destitution, and vice, until, by becoming desperate and reckless, they commit serious crimes—they have no right, under the plea of self-defence, to degrade the offenders still farther by rendering prisons more horrible than the loathsome homes from which the criminal poor generally emerge. This

and dexterity as their means of crime, proclaims their deficiency in ingenuity, in self-command, and in all the softer feelings; while it indicates a predominance of the coarser and more brutal elements of our nature. Owing to this combination of faculties, the penalty of death, when presented as a remote contingency to such individuals, finds no quality within them on which it can make a deep impression. If they possessed sufficient power of reflection to realise its high probability and its terrors, they would, in order to avoid it, employ stratagem as their means of crime, in preference to violence; if they had an adequate sensibility either to social opinion or to human emotions, they would recoil from blood; if they were timid, they would fear resistance or detection. In short, in order to *be* a murderer, a man must, as a general rule, possess the *minimum* of the faculties which confer foresight, prudence, and a just regard to self-interest, and the *maximum* of the brutal propensities which rush headlong to violence, regardless of results. Phrenology enables us to *prove* that this combination actually characterises murderers as a class. On such minds, then, the prospect of death, as a contingency, does not, and cannot, operate as a powerful restraining motive.

Farther: those propensities from which murder (as an abuse) springs, are directly stimulated, instead of being restrained, by witnessing acts of severity and violence, and especially acts of killing. The tiger in his cage rages at the sight of blood; and the bloodthirsty man becomes excited by executions. Even the average soldier, who recoils at the first aspect of carnage, becomes, when familiarised with death, indifferent to its terrors and reckless of his own life. The murders of the French Revolution produced a striking regardlessness of life in the people. One of them, when under trial for murder, addressed the judge in the following words:—"Certainly, sir, I killed the man: kill me; but do not fatigue me with so much talking." This is not theoretical reasoning, but the statement of results resting on facts. Captain Maconochie, after four years' experience of the effects of the severest criminal treatment at Norfolk Island, declares that it fostered "a tendency to reckless daring;" a quality which, "more or less, characterises all prisoners, and without which they would probably have been scared by the first threatenings of the law, and would have escaped its toils." His concluding remark goes directly to the point of the present discussion; it is in these words:—"As a feature in the criminal character, this daring is not, I think, sufficiently adverted to by those who advocate the attempt to deter from crime by severe punishments. *Tempers under its influence feel them-*



suffering, when intentionally inflicted, lacerates and pains all the higher feelings of good men, and, by exciting their sympathy for the tortured wretch, blinds them to the malignity of his crime. There is, however, a counterpart to this result, which is too little known and considered; viz., that the sight of torture interests, gratifies, and excites cruel and ferocious minds, and supplies them with a decided impulse to deeds of cruelty and blood. I object to torture, therefore, on the ground that, so far from restraining, it stimulates dangerous minds to murder; and as the infliction of an ignominious death is only a minor degree of the same species of infliction, it stands condemned by its tendency to produce the same effect.

If there be truth in the principles now stated, it follows that we shall most effectually temper and assuage the violent and bloodthirsty elements in the minds of the evil-disposed members of society, by cultivating the greatest tenderness for life as a general public sentiment. By this means, when any individual should feel a propensity to injure or to kill rising in his mind, he would find in all around him a calm abhorrence of the act, instead of that wild wonder and excitement which now accompany the announcement of such deeds, and which operate as a direct stimulant to his desires. The prospect of secluded confinement for life would *certainly not excite* his destructive propensity, but would tend, in some degree, to assuage it. By such means would society be best protected.\*

The last remark which I offer is, that the destructive propensity is liable to become morbid, and to induce acts of killing as pure symptoms of insanity—which, nevertheless, are often mistaken by society for crime, and punished by the penalty of death. Not only the poor and the profligate, but likewise educated, prosperous, and virtuous individuals, in the full enjoyment of the external goods of life, are occasionally tormented by unaccountable desires to commit suicide. When the mind is under this diseased excitement, a straw may turn the balance whether the sufferer shall kill another or himself. A case of homicidal impulse, reported by Dr Samuel B. Woodward, lately superintendent of the State Lunatic Hospital at Worcester, Massachusetts, in the *American Journal of Insanity*, No. IV., and which is reprinted in this Journal, vol. xix. p. 249, is highly instructive on this subject, and, like all similar cases, deserves to be carefully read and seriously reflected on.

\* Those who desire to see evidence of the tendency of executions to excite the destructive propensity, may consult Mr Sampson's work on "Criminal Jurisprudence considered in relation to Mental Organization."



TABLES IV. and V. exhibiting the ratio of the Encephalon and of the Cerebellum, with the Pons Varolii and Medulla Oblongata, to the weight of the whole body; together with the ratio of the Cerebellum, and Pons Varolii and Medulla Oblongata, to the Encephalon, in the observations previously given.

TABLE IV.—MALES.

Ages.	Ratio of Encephalon to Body.	Of Cerebellum, &c., to Body.	Of Cerebellum, &c., to Encephalon.	
Yrs. mo.				
1 11	1 to 14·3	...	...	...
3 6	...	...	1 to 9·3	...
6 0	...	...	1 to 8·36	...
11 0	1 to 12·2	...	...	...
17 0	...	...	1 to 7·7	...
19 0	...	...	1 to 6·44	...
21 0	...	...	1 to 7·8	...
22 0	1 to 39·8	...	...	...
23 0	1 to 45·1	1 to 276·8	1 to 6·0	Negro.
23 0	1 to 35·3	1 to 303·1	1 to 8·5	...
25 0	1 to 39·2	...	...	...
26 0	1 to 45·2	...	...	...
27 0	1 to 36·5	1 to 274·2	1 to 7·5	...
28 0	1 to 32·	...	...	...
28 0	1 to 29·8	...	...	...
28 0	1 to 35·2	...	...	...
29 0	...	...	1 to 7·3	...
30 0	...	...	1 to 7·4	...
30 0	1 to 52·3	...	...	...
32 0	1 to 34·4	1 to 244·5	1 to 7·1	...
32 0	1 to 33·8	1 to 296·	1 to 8·7	...
32 0	1 to 37·1	1 to 322·	1 to 8·2	...
32 0	...	...	1 to 7·1	...
34 0	1 to 79·8	1 to 405·	1 to 8·4	...
36 0	...	...	1 to 8·	...
37 0	1 to 39·8	...	...	...
38 0	1 to 49·8	...	...	...
38 0	1 to 25·2	...	...	...
38 0	1 to 30·9	1 to 266·6	1 to 8·6	...
38 0	...	...	1 to 8·2	...
40 0	1 to 42·2	...	...	...
40 0	...	...	1 to 7·6	Negro.
40 0	...	...	1 to 8·	...
40 0	...	...	1 to 7·7	...
40 0	...	...	1 to 7·8	...
42 0	1 to 49·7	...	...	...
44 0	...	...	1 to 8·	...
44 0	1 to 33·7	...	...	...
44 0	1 to 30·4	...	...	...
44 0	1 to 36·2	...	...	...
47 0	1 to 27·8	...	...	...
50 0	...	...	1 to 8·4	Lithuanian.
51 0	1 to 35·8	...	...	...
54 0	1 to 50·2	1 to 424·7	1 to 8·4	...
54 0	...	...	1 to 8·4	...
60 0	1 to 44·3	...	...	...
60 0	1 to 32·9	...	...	...
60 0	1 to 35·5	1 to 281·6	1 to 8·4	...
62 0	1 to 32·3	...	...	...
65 0	1 to 43·1	...	...	...
66 0	...	...	1 to 9·	...
80 0	...	...	1 to 8·	...

The average proportion of the Cerebellum, with the Pons Varolii and Medulla Oblongata, to the Encephalon, in 17 males between 25 and 55 years of age, is 1 to 7·93.

data collected by Dr Reid and myself.

AGEs.	NUMBERS WEIGHED.			HEAVIEST.			LIGHTEST.			AVERAGE.		
	Ence- phalon.	Cere- brum.	Cere- bellum.	Encephalon.	Cerebrum.	Cerebellum, &c.	Encephalon.	Cerebrum.	Cerebellum, &c.	Encephalon.	Cerebrum.	Cerebellum, &c.
9 months.	1	1	1	27 8	24 8	3 0	...	...	...	...	...	...
1 to 2 years.	2	1	1	39 12	35 4	4 8	38 0	...	...	...	...	...
2 to 5 ...	5	5	5	45 4	39 14	5 6	39 8	35 0	4 8	42 15 <sup>3</sup> / <sub>4</sub>	38 1 <sup>1</sup> / <sub>2</sub>	4 14 <sup>3</sup> / <sub>4</sub>
5 to 7 ...	4	4	4	47 10 <sup>1</sup> / <sub>2</sub>	41 11	6 0	39 12	35 0	4 9	42 10 <sup>1</sup> / <sub>2</sub>	37 7 <sup>1</sup> / <sub>2</sub>	5 3 <sup>1</sup> / <sub>2</sub>
7 to 10 ...	6	6	7	52 14	47 3	5 11	40 12	36 1	4 10	46 2 <sup>1</sup> / <sub>4</sub>	40 8 <sup>1</sup> / <sub>2</sub>	5 10 <sup>1</sup> / <sub>2</sub>
10 to 13 ...	4	3	3	55 0	45 0	6 2	43 8	38 2	5 6	50 1 <sup>1</sup> / <sub>2</sub>	42 11 <sup>1</sup> / <sub>2</sub>	5 12
13 to 16 ...	5	4	4	50 2	44 2	6 8	43 10	38 0	5 10	47 8 <sup>1</sup> / <sub>2</sub>	42 2	6 1 <sup>1</sup> / <sub>2</sub>
16 to 20 ...	8	7	7	56 0	47 8	7 2	40 4	34 0	5 8	50 12 <sup>1</sup> / <sub>4</sub>	43 8 <sup>1</sup> / <sub>2</sub>	6 5 <sup>1</sup> / <sub>2</sub>
20 to 25 ...	16	10	11	61 2	54 0	7 2	47 0	41 7	5 12	52 2 <sup>1</sup> / <sub>2</sub>	45 10 <sup>1</sup> / <sub>2</sub>	6 6 <sup>1</sup> / <sub>2</sub>
25 to 30 ...	24	15	15	56 8	49 0	7 0	38 0	38 0	5 4	49 9 <sup>1</sup> / <sub>2</sub>	43 7 <sup>1</sup> / <sub>2</sub>	6 1 <sup>1</sup> / <sub>2</sub>
30 to 40 ...	41	28	28	62 8	54 8	8 8	40 8	35 9	5 1	51 0 <sup>1</sup> / <sub>2</sub>	45 1 <sup>1</sup> / <sub>2</sub>	6 5 <sup>1</sup> / <sub>2</sub>
40 to 50 ...	44	32	32	62 12	49 0	7 10	34 0	37 13	5 6	49 3 <sup>1</sup> / <sub>2</sub>	43 5 <sup>1</sup> / <sub>2</sub>	6 4 <sup>1</sup> / <sub>2</sub>
50 to 55 ...	22	20	21	59 0	51 15	8 4	42 2	36 6	5 8	51 3 <sup>1</sup> / <sub>2</sub>	44 15	6 2 <sup>1</sup> / <sub>2</sub>
55 to 60 ...	10	8	8	52 14	46 12	6 14	39 0	39 0	4 14	48 1 <sup>1</sup> / <sub>2</sub>	42 8 <sup>1</sup> / <sub>2</sub>	6 8 <sup>1</sup> / <sub>2</sub>
60 to 70 ...	18	10	12	60 4	51 13	7 4	40 0	34 8	4 14	48 8	43 8 <sup>1</sup> / <sub>2</sub>	5 13
70 to 80 ...	5	5	5	54 10	48 2	6 8	43 8	38 4	5 4	48 1 <sup>1</sup> / <sub>2</sub>	42 3 <sup>1</sup> / <sub>2</sub>	5 13 <sup>1</sup> / <sub>2</sub>
80 to 90 ...	3	3	3	52 0	45 8	6 8	40 12	40 12	5 14	49 13 <sup>1</sup> / <sub>2</sub>	43 10	6 3 <sup>1</sup> / <sub>2</sub>
Total.	218	162	167									

The average weight of the Encephalon, in 131 males, between 25 and 55 years of age, is 50 oz. 3<sup>1</sup>/<sub>4</sub> dr. or 50 oz. 25 dr.

The extremes between these ages being 62 oz. and 12 dr., or 12 oz. 8<sup>7</sup>/<sub>5</sub> dr. above the average.

and 34 oz. 16 oz. 3<sup>25</sup>/<sub>25</sub> dr. below.

The average weight of the Encephalon in 19 persons between 10 and 20 years of age is 49 oz. 10<sup>6</sup>/<sub>10</sub> dr.

36 55 and 90 48 7<sup>05</sup>/<sub>10</sub>

The average weight of the Cerebrum, in 95 males, between 25 and 55 years of age, 44 oz. 3<sup>4</sup>/<sub>4</sub> dr.

in 14 10 and 20 43 0<sup>4</sup>/<sub>4</sub>

in 26 55 and 90 42 15<sup>8</sup>/<sub>4</sub>

The average weight of Cerebellum, with the Pons Varolii and Medulla Oblongata:—

in 96 males, between 25 and 55 years of age, 6 oz. 4<sup>05</sup>/<sub>10</sub> dr.

in 14 10 and 20 6 2<sup>5</sup>/<sub>10</sub>

in 28 55 and 90 5 15<sup>3</sup>/<sub>10</sub>

Average weight of Cerebellum only, in 57 males, between 25 and 55 years of age, 5 oz. 3<sup>6</sup>/<sub>10</sub>

8 10 and 20 5 2<sup>6</sup>/<sub>10</sub>

16 55 and 90 5 0<sup>7</sup>/<sub>10</sub>

TABLE VIII.—Exhibiting the different Weights of the Encephalon, in Males and Females, between 25 and 55 years of age.

MALES.				EMALES.			
Weights.	Number weighed.	Ratio per cent.		Weights.	Number weighed.	Ratio per cent.	
oz. oz. dr.				oz. oz. dr.			
34 ...	1	0.76	8.3	36 12 to 40	9	12.2	54.
38 ...	1	0.76		40 0 to 45	31	41.8	
40 to 45 0	9	6.8		45 0 to 50	27	36.4	
45 to 50 0	51	38.93	74.04	50 0 to 55	7	9.4	45.9
50 to 55 0	46	35.1					
55 to 60 0	19	14.5					
60 to 62 12	4	3.55	17.5				
	131				74		

TABLE IX.—Exhibiting the Average Weight of the Encephalon, Cerebrum, and Cerebellum, with the Pons Varolii and Medulla Oblongata, at different ages, in the two sexes.

AGES.	ENCEPHALON.		CEREBRUM.		CEREBELLUM, WITH PONS VAROLII AND MED. OBLONG.	
	Males.	Females.	Males.	Females.	Males.	Females.
2 to 5	42 15 <sup>3</sup> / <sub>4</sub>	37 11 <sup>1</sup> / <sub>2</sub>	38 1 <sup>1</sup> / <sub>2</sub>	33 8	4 14 <sup>2</sup> / <sub>3</sub>	4 3 <sup>1</sup> / <sub>2</sub>
5 to 7	42 10 <sup>1</sup> / <sub>2</sub>	38 5	37 7 <sup>1</sup> / <sub>2</sub>	33 10 <sup>1</sup> / <sub>2</sub>	5 3 <sup>1</sup> / <sub>2</sub>	4 10 <sup>1</sup> / <sub>2</sub>
7 to 10	46 2 <sup>1</sup> / <sub>4</sub>	41 4 <sup>1</sup> / <sub>2</sub>	40 8 <sup>1</sup> / <sub>2</sub>	36 8 <sup>1</sup> / <sub>2</sub>	5 10 <sup>1</sup> / <sub>2</sub>	5 3 <sup>1</sup> / <sub>2</sub>
10 to 16	46 10 <sup>1</sup> / <sub>2</sub>	42 4	42 6	36 7	5 15 <sup>1</sup> / <sub>2</sub>	5 13
16 to 20	50 12 <sup>1</sup> / <sub>2</sub>	44 13 <sup>1</sup> / <sub>2</sub>	43 8 <sup>1</sup> / <sub>2</sub>	39 0 <sup>1</sup> / <sub>2</sub>	6 5 <sup>1</sup> / <sub>2</sub>	5 11 <sup>1</sup> / <sub>2</sub>
20 to 25	52 2 <sup>1</sup> / <sub>2</sub>	46 12 <sup>1</sup> / <sub>2</sub>	45 10 <sup>1</sup> / <sub>2</sub>	41 6 <sup>1</sup> / <sub>2</sub>	6 6 <sup>1</sup> / <sub>2</sub>	5 11 <sup>1</sup> / <sub>2</sub>
25 to 55	50 3 <sup>3</sup> / <sub>4</sub>	44 14 <sup>1</sup> / <sub>2</sub>	44 3 <sup>1</sup> / <sub>4</sub>	39 3 <sup>1</sup> / <sub>4</sub>	6 4 <sup>1</sup> / <sub>2</sub>	5 10 <sup>1</sup> / <sub>2</sub>
55 to 60	48 1 <sup>1</sup> / <sub>2</sub>	43 10	42 8 <sup>1</sup> / <sub>2</sub>	35 10	6 3 <sup>1</sup> / <sub>2</sub>	5 3
60 to 70	48 8	43 3 <sup>1</sup> / <sub>4</sub>	43 8 <sup>1</sup> / <sub>2</sub>	37 10 <sup>1</sup> / <sub>2</sub>	5 13	5 9
70 to 80	48 1 <sup>1</sup> / <sub>2</sub>	42 11	42 3 <sup>1</sup> / <sub>2</sub>	37 0	5 13 <sup>1</sup> / <sub>2</sub>	5 8

Weight of Encephalon between 25 and 55 years of age... Males.....50 3<sup>3</sup>/<sub>4</sub> 25  
Females.....44 14<sup>1</sup>/<sub>2</sub> 3

Difference, 5 4<sup>1</sup>/<sub>2</sub>

Ratio of Female to Male Encephalon.....as 1 to 1.12

Weight of Cerebrum..... Males.....44 3<sup>1</sup>/<sub>4</sub>

Females.....39 3<sup>1</sup>/<sub>4</sub>

Difference, 5 0<sup>1</sup>/<sub>2</sub>

Ratio of Female to Male Cerebrum.....as 1 to 1.12

Weight of Cerebellum, with Pons and Medulla ..... Males..... 6 4<sup>1</sup>/<sub>2</sub> 0.5

Females..... 5 10<sup>1</sup>/<sub>2</sub>

Difference, 9<sup>1</sup>/<sub>2</sub>

Ratio of Female to Male Cerebellum, &c.....as 1 to 1.10

Weight of Cerebellum only ..... Males..... 5 3<sup>1</sup>/<sub>4</sub>

Females..... 4 12<sup>1</sup>/<sub>4</sub>

Difference, 7<sup>1</sup>/<sub>2</sub>

Ratio of Female to Male Cerebellum,.....as 1 to 1.09

*Dr Peacock's Tables of Weights of Brains, &c.* 367

TABLE XII.—*Ratio of the Weight of the Cerebellum, and of the Cerebellum with the Pons Varolii and Medulla Oblongata, to the Encephalon, in the two sexes, at different periods of life, in 170 and 278 persons respectively.*

MALES.

Ages.	Numbers weighed.	Cerebellum to Encephalon.	Numbers weighed.	Cerebellum, &c. to Encephalon.
4 months	1	1 to 11.	1	1 to 9.16
1 year	1	1 to 9.93	1	1 to 8.33
2½ years	1	1 to 9.53	1	1 to 7.99
3 ...	1	1 to 9.87	1	1 to 8.77
3½ ...	1	1 to 10.29	1	1 to 9.07
4 ...	1	1 to 9.73	1	1 to 8.41
4½ ...	1	1 to 11.09	1	1 to 9.59
5 to 7 ...	3	1 to 9.74	4	1 to 8.20
7 to 10 ...	4	1 to 9.42	6	1 to 8.04
10 to 13 ...	3	1 to 9.47	3	1 to 8.82
13 to 16½ ...	1	1 to 9.09	4	1 to 7.91
16 to 20 ...	4	1 to 9.42	7	1 to 7.58
20 to 25 ...	5	1 to 9.68	10	1 to 8.18
25 to 55 ...	55	1 to 9.58	95	1 to 8.05
55 to 90 ...	15	1 to 9.94	28	1 to 8.10
	97		164	

FEMALES.

1 year and 8 months	1	1 to 8.79	1	1 to 7.94
2½ years	1	1 to 9.30	1	1 to 8.41
2½ ...	4	1 to 10.00	4	1 to 8.48
3 ...	...	...	1	1 to 10.28
3 ...	...	...	1	1 to 9.33
3½ ...	1	1 to 10.07	1	1 to 9.33
5 and 6 ...	2	1 to 10.64	3	1 to 8.71
7 and 8 ...	3	1 to 9.47	4	1 to 7.88
12 ...	1	1 to 8.48	1	1 to 7.10
15 ...	1	1 to 9.11	1	1 to 7.45
16 to 20 ...	6	1 to 9.12	9	1 to 7.97
20 to 25 ...	4	1 to 7.57	10	1 to 7.35
25 to 55 ...	34	1 to 9.34	58	1 to 7.87
55 to 90 ...	15	1 to 9.31	19	1 to 7.80
	73		114	

Ratio of the several portions of the Encephalon in the two sexes, in persons between 25 and 55 years of age:—

	Males.	Females.
Encephalon,.....	1000	1000
Cerebrum,.....	875.8	872.9
Cerebellum,.....	104.3	107.
Pons Varolii and Medulla Oblongata,....	19.9	20.1



lately to that of the whole encephalon, somewhat higher in females than in males. This inference is not, however, confirmed by the observations of M. Parchappé; and the difference which, from the present data, appears to exist, is much less than was supposed by Sir W. Hamilton. It is, therefore, very questionable how far the excess of weight in females can be regarded as constituting a general rule.

14th, Though the data now published are defective in weights of the whole encephalon and its several portions, in infants and young persons, they render it most probable that the ratio of the cerebellum alone, or with the Pons Varolii and medulla oblongata, to the cerebrum and encephalon, undergoes but little change during the whole period of life, after the expiration of the first year. Further observations are required on this point;—the facts at present recorded are, however, opposed to the surmise, that the cerebellum attains its complete state of development at a period much anterior to that of the rest of the brain.

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VI.—*Memoir of the Life and Writings of the late  
Dr Andrew Combe.*

Andrew Combe, M.D., died at Gorgie Mill, near Edinburgh, on Monday the 9th of August 1847, aged 49 years. Since 1820, he had laboured at intervals under pulmonary disease, which frequently interrupted his practice, compelled him to spend several winters abroad, and at length, by wholly unfitting him for the active duties of his profession, gave him that leisure which he employed so usefully in the preparation of his well-known works on health and education. In April last, hoping to receive benefit from a voyage, and desirous to visit a brother who had long been settled in the State of New York, he paid a short visit to America. Unfortunately the circumstances of the passage were unfavourable, so that his health was rather deteriorated than improved; but it was not till within eight days of his death that his condition became alarming. The immediate cause of that event was chronic disease of the bowels, which suddenly came to a crisis, and with such intensity as to defy every effort of medical skill. His sufferings were not great, and he displayed to the end that cheerfulness, serenity, and resignation, which were prominent features of his character during life.

Dr Combe was born at Livingston's Yards, a suburb under the south-west angle of the rock of Edinburgh Castle, on the



100

two of which were spent, in the month of November, in the Bay of Biscay, in a very heavy sea. For more than three weeks I was generally very sick, and always in a state of nausea; and during the whole time, although my bed was repeatedly partially wetted by salt water, and the weather cold, the flow of blood towards the skin was so powerful as to keep it generally warm, always moist, and often wet with perspiration, forced out by retching and nausea. The result was, that, on entering the Mediterranean at the end of the month, and there meeting fine weather, I found myself, though still more reduced in flesh and very weak, in every other respect decidedly improved; and, on my arrival in Italy, at the end of seven weeks, recovery fairly commenced, after about ten months' illness; and, by great care, it went on with little interruption, till the summer of 1821, when I returned home.

"To carry on what was so well begun, riding on horseback in the country was resorted to; and that exercise was found to excite the skin so beneficially as to keep it always pleasantly warm, and generally bedewed with moisture, even to the extremities of the toes; and in proportion to this effect was the advantage derived from it in relieving the chest, increasing the strength, and improving the appetite. A second winter was spent in the south with equal benefit; and in the summer of 1822, riding was resumed at home, and the health continued to improve. The excitement given to the skin by riding was sufficient to keep the feet warm, and to prevent even considerable changes of temperature from being felt; and rain was not more regarded, although special attention was of course paid to taking off damp or wet clothes the moment the ride was at an end. Strength increased so much under this plan, combined with sponging, friction, and other means, that it was persevered in through the very severe winter of 1822-3, with the best effects. For nine years thereafter the health continued good, under the usual exposure of professional life; but in 1831 it again gave way, and pulmonary symptoms of a suspicious character once more made their appearance. The same system was pursued, and the same results have again followed the invigoration of the cutaneous functions and of the general health by a sea-voyage, horseback exercise, and the regular use of the bath. These, as formerly, have proved beneficial in proportion to their influence in keeping up warmth and moisture of the surface and extremities."

As indicated by the preceding extract, he was able to begin medical practice in Edinburgh in 1823, and to pursue it

uninterruptedly for nine years. From the month of May 1812, he constantly resided, when in Edinburgh, in the house of his elder brother George; and it was not till the marriage of the latter with Miss Siddons of London in 1833, that he established himself in a separate residence.

Soon after commencing practice, he became deeply sensible of the deficiency of ordinary medical education, in not teaching, with sufficient earnestness and perspicuity, the condition which regulate the healthy action of the bodily organs—knowledge of which conditions was, in his opinion, of primary importance in the prevention, detection, and treatment of disease. "It is true," says he, "that many medical men sooner or later, work out this knowledge for themselves; but I have no hesitation in saying, that these are exceptions to the general rule, and that the greater number pass through life without a conception of its value in the prevention and cure of disease. Even those who ultimately become familiar with the subject, almost always attain their knowledge only after having suffered from the want of it, and rarely master it so completely as they would have done had it been made a part of their elementary education, to which they saw others attach importance. In my own instance, it was only after having entered upon practice that I had first occasion to feel



obtain more peace of mind and bodily ease than by any other means which they can use."

In 1832, Dr Combe was sufficiently recovered to be able to pass the ensuing winter in Scotland, and in 1833 to resume his practice. In 1836 he was honoured with the appointment of Physician in Ordinary to the King and Queen of the Belgians, and for several months attended the Royal Family in Brussels; but the climate proving unfavourable to him, an alarming return of the pulmonary symptoms abruptly sent him back to recruit his health in his native land. Subsequently he continued to act as Consulting Physician to their Majesties, and occasionally paid them a visit. Six or seven years ago he was appointed one of the Physicians Extraordinary to the Queen in Scotland, and on 20th December 1844 one of her Majesty's Physicians in Ordinary in that part of the United Kingdom. He was also a Fellow of the Royal College of Physicians of Edinburgh, and a Corresponding Member of the Imperial and Royal Society of Physicians of Vienna.

The winters 1842-3 and 1843-4 were spent by Dr Combe in Madeira. He wrote thence two long letters respecting the island and its climate and invalids, addressed to Mr Charles Maclaren, the editor of the *Scotsman*, in which newspaper they were published in April and May 1843.\*

In the beginning of 1845, he had a severe illness of a very singular character, "previous to which," says Dr Scott, "there had been more signs of general feebleness and languor, with a partial failure of the remarkable mental powers with which Dr Combe was endowed. This was shewn more by a want of power of application to any subject for a length of time, than by any other symptom. The concentrative faculty, which was so remarkable in him, was feebler than usual. The clearness of mind and cheerfulness remained unchanged, but there was a slight failing of the usual brilliancy and power. This, however, was observed only by his nearer friends; to strangers nothing appeared. In the winter, the attack commenced by a slight bronchitis, followed by languor and weakness, and for some time there were feelings of complete sinking—more, however, revealed by internal consciousness than by any external signs. In the latter half of February, there was a continual necessity for stimulants and food every two or three hours, by night and by day, and these were required in quantities remarkable for one who had always been so abstemious." On the morn-

\* During the last twenty years he lived on terms of close and uninterrupted friendship with Mr Maclaren, and occasionally contributed articles on medical, sanitary, and other subjects, to the above-named influential journal.

balance and high efficiency of the mental powers of Dr Combe. The form of his head exemplifies that of the mixed Teutonic and Celtic race which inhabits the Lowlands of Scotland. It presents the elongated appearance, and the fulness in the region occupied by the organs of Philoprogenitiveness, Concentrativeness, Adhesiveness, Self-Esteem, and Love of Approbation, which are characteristic of the Celt; while there are large and massive anterior lobes, well developed both in the observing and reflecting compartments (the organs of Comparison and Causality however predominating),—together with the high and rounded coronal region which distinguishes the Teutonic race. The base of the brain, as in the Celt, is relatively narrow, and is small in the situation of Alimentiveness. The coronal aspect presents nearly the form of a perfect oval. No portion of the surface of the head is seen to project, nor are there any depressions except in the situations of two or three of the perceptive organs. Further particulars, including measurements, will be published hereafter, when an examination of the cranium, which is not at present accessible to us, shall have furnished additional data.

Dr Combe was of a tall stature, his height being upwards of six feet. His person was very slender, and, of late years, he stooped considerably in consequence of his feeble health. His temperament was nervous-bilious, with a slight infusion of the sanguine. The expression of his voice, countenance, and dark beaming eye, was that of intelligence, goodness, earnestness, and affection.

The works in connexion with which the name of Dr Combe is most familiar to the public, are—*The Principles of Physiology applied to the Preservation of Health, and to the Improvement of Physical and Mental Education*, of which thirteen editions have been called for since its first appearance in 1834; *The Physiology of Digestion considered with Relation to the Principles of Dietetics*, originally published in 1836, and now in the seventh edition; and *A Treatise on the Physiological and Moral Management of Infancy; being a Practical Exposition of the Principles of Infant Training, for the Use of Parents*—of which the first edition appeared in 1840, and the fifth in the present year. The first of these works is dedicated to Leopold I., King of the Belgians; the second, to the author's brother George; and the third to his valued friend Sir James Clark. In preparing them, his constant aim was to exhibit the relation subsisting between the rules of conduct recommended, and the particular laws of the organization according to which their influence is exerted, so

were then to be seen in the asylum), correspond with the doctrines which I was engaged in studying, that I very naturally supposed that M. Esquirol himself must be a phrenologist."

In this supposition, however, he soon learned with surprise that he was mistaken; but at the subsequent stages of Esquirol's course, he failed to discover in the Professor's comments upon the doctrines of Dr Gall, any facts or reasonings which tended to shake his own previous impression of their general soundness—and accordingly he continued his inquiry.

"Feeling at every step I made in the examination of Dr Gall's discoveries, a deeper and deeper sense of their importance and practical usefulness if they should prove to be true, and having made myself sufficiently acquainted with his principles to be able to follow their application, I then entered upon the perusal of Dr Spurzheim's French work, *Sur la Folie*, with much attention, and with constant reference to the cases and phenomena brought under review in the wards and lecture-room of the Salpêtrière; and, when thus employed, I became still more alive to the value of Phrenology as a branch of professional knowledge, and lost no opportunity of testing its evidences by a comparison with nature. Shortly after this, viz. in 1820, a treatise, entitled *De la Folie*, made its appearance from the pen of M. Georget, and met in many quarters with much commendation, for the precision, consistency, and soundness, of its doctrines. This work proved not only to be very ably written, but to be based throughout on the principles of Phrenology, and to be devoted, in its whole substance, to the advocacy of the same doctrines in regard to mental affections, which, with some slight differences, it was the sole object of that previously published by Dr Spurzheim, to inculcate. Of the latter, however, M. Georget made no mention whatever, although he referred to Dr Gall's writings and lectures as the sources of many of his ideas; and, so oddly are opinions biassed by preconceived notions, that it is said to have happened that the same critic, who expressed his disrespect for the views as published by the one author, bestowed his approbation upon them as coming from the other. I am uncertain whether this allegation be strictly correct; but I am quite secure in stating, that Dr Spurzheim's book, although in substance the same, met with a very different reception from that published by Dr Georget."

We need not add that a thorough conviction of the truth of the principles and leading details of Phrenology was the result of his investigations, and that he continued till his death to be one of the most earnest and uncompromising, but, at the same time, one of the most sober and cautious, of its cultivators and advocates. On 22d February 1820 was instituted the Phrenological Society, of which he and his brother were two of the first four members who banded themselves together for the study and practice of the new opinions, and who were speedily joined by a goodly company of fellow-la-



bourers. On 29th November 1827 he was elected to the office of President, which he filled during the two following years. To the volume of *Transactions* published by the Society in 1824, he contributed two papers—"On the Effects of Injuries of the Brain upon the Manifestations of the Mind," and "Observations on Dr Barclay's Objections to Phrenology." In 1823, he joined Mr William Scott, Mr James Simpson, Dr Richard Poole, and Mr George Combe, in establishing *The Phrenological Journal*, of which he continued to be a proprietor till the completion of the First Series of ten volumes in 1837, and a contributor down to the year preceding that of his death. Latterly, however, the mental labour which he was constantly devoting to the composition of his physiological works, and to the improvement of the successive editions which were rapidly called for, rendered it impossible for him to write so much for the Journal as he had formerly done; but he continued to give his valuable advice and suggestions to the editor on all subjects concerning which it was thought necessary to consult him. From first to last, indeed, many of the articles written by other contributors had the benefit of his revision before being published; and he, on his part, was always desirous to submit his manuscripts to the judgment of his friends, and to obtain their criticisms on his arguments and language. The style of the first paper which he wrote for publication, was so imperfect, that, when submitted to his brother George for revision, it underwent numerous alterations. At the first aspect of the havoc which had been made in its expressions and arrangement, Andrew felt mortified and annoyed; but when he entered into the details, he adopted, and gratefully acknowledged, the value of the suggestions which had been offered for its improvement. In mentioning the circumstance afterwards, at the distance of many years, he remarked that that criticism, which had at first appeared to him to be severe, had proved a valuable lesson, for it conveyed to his mind the first perception of the importance of style in didactic writing. From that time he studied with care the art of composition, and he frequently repaid, by his corrections on his brother's writings, that service which he acknowledged to have been done to himself at the commencement of his literary career. At no time, however, was Dr Combe a fluent writer, when method and precision were called for. He laboriously arranged his thoughts in the order best suited for their clear enunciation; and in embodying them in language, his sole aim was to express his meaning with plainness, precision, and as small an expenditure of words as was compatible with



*The late Dr Andrew Combe.*

ing enough impression upon readers of slow ap-  
For the latter purpose, he resorted largely and  
to repetition of the same idea in different lan-  
in connection with different illustrations. In  
deleted and interlined abundantly, and often  
sentences. Most of his letters, however, were  
*de calamo*.

is contributions to the *Phrenological Journal*  
h were reprinted in a volume of *Selections*,  
836) is subjoined in a note.\*

\* Vol. I.—1823-4.

unctions of the Nerves.—No. 1, p. 58.

d Claim of Reil to Dr Gall's Discoveries in the Anatomy  
1, p. 72.

plication of Phrenology on a Voyage.—No. 2, p. 259; and

Question, "Does Phrenology afford a satisfactory explana-  
and Intellectual Faculties of Man?" Read to the Medical  
gh, Nov. 21, 1823.—No. 3, p. 1; and *Selections*, p. 317.

mentioned a very long and animated debate in the Medical  
n 21st and 25th November, and led to some curious legal  
proceedings, narrated in No. 2, p. 307.

he Nervous System.—No. 3, p. 455.

anical Genius.—No. 4, p. 509; and *Selections*, p. 276.

We hardly need say that Dr Combe regarded the notion that Phrenology can endanger true religion, as altogether ground-

24. Additional Remarks on Dr Thomas's Theory of the Temperaments.—No. 16, p. 604; and *Selections*, p. 205.

25. On the Functions of the Sense of Sight, considered chiefly in its relations to Ideas of Form, Colour, Magnitude, and Distance.—No. 16, p. 608.

VOL. V.—1828-9.

26. Speech at Dinner given by the Phrenological Society to Dr Spurzheim.—No. 17, p. 118.

27. Phrenological Notice of Mr Wardrope's Case of Restoration to Sight in a Lady of 46 Years of Age.—No. 18, p. 286.

28. Address from the President's Chair at a Meeting of the Phrenological Society, Nov. 13, 1828.—No. 19, p. 475.

29. Observations on Mental Derangement, and some of its Causes.—No. 20, p. 483.

VOL. VI.—1829-30.

30. On the Exciting or Occasional Causes of Mental Derangement.—No. 21, p. 38.

31. On Mental Exercise as a Means of Health.—No. 21, p. 109.

32. Review of Professor Uccelli's "Compendio di Anatomia-Fisiologico Comparata."—No. 22, p. 201.

33. On the Exciting or Occasional Causes of Mental Derangement (continued).—No. 23, p. 258.

The substance of Nos. 29, 30, and 33 was afterwards embodied in Dr Combe's work on Mental Derangement.

34. Notice of Blumenbach's "Decades Collectionis sue Craniorum Diversarum Gentium."—No. 23, p. 278.

35. On the Laws of Mental Exercise and Health.—No. 23, p. 283.

36. Phrenology in London—Mr Deville's Museum—The Deaf and Dumb.—No. 23, p. 569.

37. Review of Macnish's "Philosophy of Sleep."—No. 26, p. 576.

VOL. VII.—1831-2.

38. Review of Dr Abercrombie's "Inquiries concerning the Intellectual Powers."—No. 27, p. 46.

39. Notice of Woodbridge's "American Annals of Education," No. I.—No. 28, p. 166.

40. Notice of the American "Chronicle of the Times."—No. 29, p. 269.

41. Notice of "American Annals of Education," No. II.—No. 29, p. 273.

VOL. VIII.—1832-4.

42. On the Nature and Uses of the Skin, as connected with the Preservation of Health.—No. 34, p. 1.

43. Notice of Dr Barlow's Article on Physical Education, in the "Cyclopædia of Practical Medicine."—No. 34, p. 37.

44. On the Structure and Functions of the Muscular System, viewed in relation to the Principles of Exercise.—No. 36, p. 164.

The substance of Nos. 31, 35, 42, and 44 was afterwards embodied in Dr Combe's "Physiology applied to Health and Education."

45. On the Factories' Regulation Bill.—No. 36, p. 231.

46. Dr Spurzheim, the Marquis Moscati, and the London Phrenological Society.—No. 36, p. 237.

47. Review of Dr Caldwell's "Essay on Temperament."—No. 37, p. 367.

48. Notice of Dr Caldwell's "Thoughts on the Pathology, Prevention, and Treatment of Intemperance, as a Form of Mental Derangement."—No. 40, p. 624-7.

the ways of God, than the common practice of utterly disregarding, as unnecessary to the manifestations of mind, conditions which *He* has in *His* wisdom seen fit to render essential to its operations. It seems," says he, "to be the false dread of believing matter necessary to the workings of mind which leads to this practical impiety—as if we could gainsay or abolish what God himself has decreed to be right!"\*

It was not till 1831 that Dr Combe ventured to appear as the sole author of a volume. The work which he then published was *Observations on Mental Derangement; being an application of the Principles of Phrenology to the Elucidation of the Causes, Symptoms, Nature, and Treatment, of Insanity*. This treatise has long been out of print; and although, in 1841, a new edition was announced to be in preparation by Dr Browne of the Crichton Institution near Dumfries, another announcement speedily followed, to the effect that the demands of that gentleman's duties upon his time had been found so imperative as to compel him to abandon his design. On this subject Dr Combe himself writes as follows, in the preface to another of his works:—"As many inquiries continue to be made for a new edition of my *Observations on Mental Derangement*, I avail myself of this opportunity to state, that infirm health having prevented me from devoting much attention to the treatment of insanity for some years past, and consequently disqualified me for doing that justice to the subject which its later progress and inherent importance imperatively demand, I have, although with great reluctance, abandoned all present intention of reprinting the work."—(*Principles of Physiology applied to Health, &c.*, 11th ed., 1842.) We hope that means will yet be found to supply the deficiencies here indicated, so that copies of this valuable work may no longer be sought for in vain.

In the beginning of 1846, Dr Combe's strong conviction of the importance of Phrenology to medical men induced him

VOL. XVIII.—1845.

77. On Merit and Demerit, as affected by the Doctrine of Moral Necessity.—No. 86, p. 337. (Written about twenty years before, and lately found by accident among old papers.)

VOL. XIX.—1846.

78. *Phrenology—its Nature and Uses: An Address to the Students of Anderson's University.*—No. 87, p. 97.

\* Review of Abercrombie's Inquiries concerning the Intellectual Powers, in *Phren. Jour.*, vol. vii., p. 54; where the subject is treated of at some length. See also *Physiology applied to Health and Education*, chap. xi., at the beginning.

Phrenology in relation to himself and his n

"Lastly," says he, "(to come to my own experience, years, declared that my obligations to Phrenology and professional capacity, are very great—greater, other single branch of science. When I began to practice at the outset of my career, I was warned that if I did so, it would prove an almost insurmountable bar to professional success. Trusting to the sustaining power of Phrenology, nevertheless, to avow my convictions, and to follow the path which I deemed right, whenever the occasion required it; and the result was a success which I placed on the omnipotence and stability of Phrenology did not prove any impediment to my career; on the contrary, it in many respects extended the sphere of my usefulness, and greatly contributed to my happiness, and the confidence of the public in the faculties which I possessed, and the direction to the faculties which I possessed, some who might otherwise have employed me, were deterred by their prejudices, from doing so; but their place was taken by others, who, in their turn, would not have sought to employ me for Phrenology; and, ere long, many even of the former returned, and ultimately took place among my warmest supporters. It is, that, in the long run, professional success or failure, on a man holding this or that particular opinion at the moment, to be popular or the reverse. Success depends on professional skill and attainments, on general soundness of mind, on readiness in resource, moral integrity, kindness of heart, and persevering industry. These are the qualities which give confidence in the hour of danger; and you may depend on it, that, if you give decided evidence of your possessing them in the hour of danger, you will compel even the most ardent opponents to respect your opinions on this as well as on other points, even while they may differ from you. In the practice of Phrenology, also, I have derived the utmost advantage from this, and have gained a firmer hold on the confidence of the public, and have given out to them its great practical value in cond



such an assembly as the present. Some among the young and ardent minds who now listen to my words may be impressed by them, and stimulated to the study of a science which, rightly used, may not only greatly contribute to their professional success, but amply repay them for their trouble, by its utility in every relation of life.

"But while I estimate thus highly the value of Phrenology, it is right to warn you that it is of Phrenology as it exists in the minds of its well-informed cultivators, after years of study and observation, that I speak, and not of the fancy which many substitute for it in their own minds, and designate by its name. Of the latter kind of Phrenology, nobody can have a lower opinion than I have. It neither is nor ever can be of any use, either to its possessor or to others. The Phrenology which I have here recommended to you, is a science which cannot be mastered or judged of in a day, in a week, or in a month. Like other sciences, it must be studied before it can be known. Many entertain the notion that they have only to read a book or a pamphlet to qualify themselves to estimate its bearings, and pronounce authoritatively on its merits. This is a grand mistake; as well might we expect to become the equals of Liebig or Faraday, by reading a volume on Chemistry. Till we become acquainted with Phrenology in its details, with its evidences, and with its manifold applications to medicine, education, and morals, we are in truth as incapable of forming a correct opinion of its nature and uses, as we should be of those of Chemistry while in a similar state of ignorance."\*

To *The British and Foreign Medical Review*, edited by his friend Dr John Forbes, Dr Combe contributed the following papers:—

1. Review of Sir James Clark's "Treatise on Pulmonary Consumption."—No. I., p. 70; Jan. 1836.
2. Review of "Parker on the Stomach in its Morbid States."—No. XIII., p. 115; Jan. 1839.
3. Article on Phrenology.—No. XVII., p. 190; Jan. 1840.†
4. Letter to the Editor, "On the Observation of Nature in the Treatment of Disease."—No. XLII., p. 505; April 1846.
5. Second Letter to the Editor, "On the Observation of Nature in the Study and Treatment of Disease," (in answer to a Letter by Dr Symonds in No. XLIV.)—No. XLV., p. 257; Jan. 1847.
6. Third Letter to the Editor, "On the Observation of Nature in the Treatment of Disease."—No. XLVI., p. 592; April 1847.

About a year before his death, Dr Combe formed the design of writing a treatise on the means of advancing medical

\* Dr Combe has expressed his opinion of Phrenology, also in his *Physiology applied to Health and Education*, chap. xiii., p. 376; in his work on *Infancy*, chap. xv., p. 134, &c.; and in the *British and Foreign Medical Review*, No. 17, Article VII.

† This article was separately issued as a pamphlet, with the following title: "Phrenology Physiologically and Philosophically considered; with Reasons for its Study, and Directions for its Successful Prosecution. Reprinted from *The British and Foreign Medical Review*. London: John Churchill, 1840."

proceedings in 1841, had regarded the executor's conduct with indignation, and taken a warm interest in the endeavour to call him to account. We subjoin an extract from this document, not merely on account of the information which it contains, but as a specimen of Dr Combe's French style.\* So strongly did he feel in this matter, that he contributed two hundred and twenty pounds to the fund subscribed by members of the Phrenological Society for carrying on the lawsuit against Dr Verity. In a letter dated 30th August 1841, he intimated to the Society "his intention, should no more urgent claims come in the way in the interval between that time and his death, to devote as much as L.500 for the purpose, if that should be required to establish our right, or to do our utmost to establish it." More urgent claims did intervene, so that the amount actually devoted by him to the

\* "4° En parlant du certificat officiel de l'existence continuée de la Société, donné par M. Black, Lord Provost d'Edimbourg, M. Verity a la hardiesse d'affirmer qu'il a été accordé par Sa Seigneurie par complaisance pour 'son ami' Sir George Mackenzie, et sans avoir vu le livre ou registre de la Société. Cette allégation est une pure calomnie. Le Lord Provost n'est pas, et n'a jamais été, l'ami personnel de Sir George Mackenzie; et heureusement sa réputation est trop haute pour qu'elle puisse être atteinte par une accusation si déplacée. Ainsi, en dépit de l'insinuation inscrupuleuse de M. Verity, le témoignage que M. Black a donné dans sa qualité officielle, et qui porte les armes de la ville, a, et doit avoir, le plus grand poids.

"5° M. Verity dit que M. Cox, le secrétaire de la Société, dans sa lettre du 22 Janvier 1841, mentionne que la Société n'avait point tenu de séance depuis plusieurs années, et n'existait plus. Cette assertion est aussi dénuée de fondement que toutes les autres. L'expression dans la lettre est, que la Société n'avait tenu depuis quelques années des 'séances RÉGULIÈRES';—que ses séances n'avaient pas été tenues à des périodes fixées. Mais (chose soigneusement cachée par M. Verity, lorsqu'il soutient que la Société s'est constituée de nouveau au mois de Décembre 1840) la même lettre fait mention d'une séance générale de la Société, tenue le 13 Juillet 1840, deux mois avant la mort du testateur, et dans laquelle M. Cox avait été autorisé à continuer le bail des appartements depuis longtemps occupés par la Société, et ce pour cinq nouvelles années. Certes, il serait difficile pour M. Verity d'expliquer comment une Société, selon lui défunte depuis plusieurs années, aurait pu tenir une séance générale et renouveler son bail cinq mois au moins avant de s'être reconstituée!

"6° M. Verity demande pourquoi, si le livre ou registre de la Société est régulier et correct, on ne le montre pas devant les tribunaux de la Grande-Bretagne? En faisant cette question, M. Verity savait trop bien que lui-même était seul obstacle à ce que les tribunaux anglais prononcent entre lui et la Société; que résidant en France et ne voulant pas venir plaider en Angleterre, les tribunaux anglais n'ont pas le pouvoir de le faire amener devant eux; que n'ayant rien sur le sol anglais, il défie en France la justice nationale de son pays, tandis qu'il refuse celle des tribunaux français. S'il désire réellement la justice, il sait que pour faire cesser les poursuites dont il est l'objet en France, il n'a qu'à organiser en Angleterre ou en Ecosse un procès dans lequel toute la question pourrait être décidée. La Société a toujours ardemment souhaité qu'un tel procès s'engageât, et M. Verity y a été provoqué plusieurs fois; il l'est encore, et c'est à lui à expliquer à la Cour de Cassation pourquoi il refuse de se soumettre aux lois de son propre pays."

Cobden, with whom he was personally acquainted, and whom he rejoiced to reckon among the number of his friends and correspondents. In that gentleman's company, he last year spent most agreeably the greater part of a day at Kingston-on-Thames and Hampton Court. He fully sympathized with Mr Cobden's feeling as to the pre-eminence of the *moral* consequences of free-trade—the linking of mankind into one universal brotherhood. It will readily be inferred that the recent agitation against the law of entail met his cordial approval; with Lord Kames he considered that when a lawgiver “ventures to tamper with the laws of nature,” endless and complicated mischief must ensue, even to those whom a vain attempt is made to benefit. So also, the late discussions in Scotland about Sunday-trains on railways, excited in him a keen interest; insomuch, that he had actually given orders for the purchase of shares in the Edinburgh and Glasgow Railway, with the view of affording, by his vote, a public testimony in support of that section of the partners, who, while explicitly recognising the excellence of a weekly day of rest, look upon the virtual shutting up, for four-and-twenty hours every week, of the highway between two great cities, as a gross infringement of the rights of conscience, and a direct injury to the public. He saw much more of intolerance than of religion in the demands of those who—themselves claiming and enjoying an unbounded liberty to abstain from travelling, to any distance or on any occasion whatever, upon a Sunday—insist nevertheless on depriving all who hold other opinions as to sabbath-observance from enjoying a similar liberty of conduct. Within the last three months the public voice of Scotland has decided, in a manner not to be mistaken, that the means of travelling on Sundays shall be afforded to a reasonable extent; and Dr Combe felt satisfied that such must speedily be the result of the discussions referred to. As the express object of his intended purchase of railway shares was the declaration of his opinion, we have felt it incumbent on us to mention here the light in which he viewed the conduct of the sabbatarian party.

The following beautiful delineation of Dr Combe's character originally appeared in the *Scotsman* of 21st August:—

“The decease of Dr Combe will have taken no one who knew him by surprise, for he was for many years in that condition which makes life a greater miracle than death; but it will not on this account be the less deplored, either as causing a blank in the circle of private friendship, or as the signification of a public loss. Dr Combe belonged to that rare class of physicians who present professional knowledge in connection with



the powers of a philosophical intellect, and yet, in practical matters, appear constantly under the guidance of a rich natural sagacity. All of his works are marked by a peculiar earnestness, lucidity, and simplicity, characteristic of the author; they present hygienic principles with a clearness for which we know no parallel in medical literature. To this must be ascribed much of the extraordinary success they have met with, and, on this quality undoubtedly, rests no small portion of their universally acknowledged utility. Those, however, who look below the surface will not fail to trace a deep philosophical spirit as pervading these works, something arising from a perfect apprehension of, and a perfect allegiance to, the natural rule of God in our being. It has been a guidance—we would almost say an inspiration, of the author, without ever carrying him for a moment where ordinary readers could not follow him. Here, we think, is the true though latent strength of Dr Combe's popular writings, and that which will probably give them a long-enduring pre-eminence in their particular department. We always feel, in reading them, that we are listening to one of those whom Nature has appointed to expound and declare her mysteries for the edification of her multitudinous family. In his own section of her priesthood, certainly few have stood in his grade, fewer still become his superiors.

“The personal character and private life of Dr Combe formed a beautiful and harmonious commentary upon his writings. In the bosom of his family and the limited social circle to which his weakly health confined him, he was the same benignant and gentle being whom the world finds addressing it in these compositions. The same clear, sagacious intelligence, the same entire right-mindedness, shone in his conversation. An answer to any query put to him, whether respecting professional or miscellaneous matters, was precisely like a passage of one of his books, earnest, direct, and conclusive. Whatever, moreover, he called upon others to do or to avoid, that he did, and that he avoided, in his own course of life; for doctrine with him was not something to be treated as external to himself, but as the expression of a system of Divine appointment, of which he was a part. To his rigid though unostentatious adherence to the natural laws which he explained, it was owing that he sustained himself for many years in a certain measure of health and exemption from suffering, while labouring under the pulmonary disease which so often threatened to cut short his career. On this point, there is the more reason to speak emphatically, when we reflect that the years thus redeemed from the grave, were employed in that which will yet save many from premature death; as if it had been his aim to shew the value of even the smallest remains of life and strength, and thus advance one of the principles dearest to humanity. It was not, however, in any of these respects that the character of Dr Combe made its best impression, but in his perfect geniality and simplicity, and the untiring energy of his practical benevolence. Here resided the true charm of his nature, and that which made him the beloved of all who knew him. No irritability attended his infirm health; no jealousy did he feel regarding those whom superior strength enabled to outstrip him in the professional race. Kindly and cordial to all, he did not seem to feel as if he could have an enemy—and therefore, we believe, he never had one. It might almost have been said that he was



too gentle and unobtrusive—and so his friends, perhaps, would have thought him, had it not on the other hand, appeared as the most befitting character of one who, they all knew, was not to be long spared to them, and on whom the hues of a brighter and more angelic being seemed already to be shed."

The article here quoted, is reprinted in the concluding number of *The British and Foreign Medical Review*, where Dr Forbes, in introducing it, pays the tribute of friendship in the following terms:—

"We are indebted to the columns of that very superior newspaper, *The Scotman*, for the following excellent account of an excellent man—if ever such there was. We have reason to believe, that it is from the pen of a celebrated writer, as well as a kindred spirit, who knew the deceased long and well—Mr Robert Chambers.\* In all that is therein said in commendation of the character of Dr Combe, we so entirely concur—and we speak from long personal intercourse—that if we could wish any of the expressions altered, it would be only that they might be made still stronger and more emphatic. Never, we will venture to say, did the ranks of Physic lose a more estimable member; and rarely—very rarely—has the grave closed over a gentler, truer, wiser, or better man. His loss to his friends is a loss that can never be supplied; his loss to the community is one of the greatest it could sustain in losing an individual. But he has fulfilled his mission, and done his work as far as was permitted. May they who are left to lament him, strive, as far as in them lies, to emulate his bright example!"

In a will written with his own hand in 1844, Dr Combe distributed the chief part of his property among his relations, preferring those who seemed to him to stand most in need of his benefaction, and leaving suitable acknowledgments to such as he felt himself indebted to for special services. He also made the following bequests, which we publish for the sole purpose of letting it be seen what institutions he thought most deserving or requiring his support. "I leave L.100 sterling to the Royal Infirmary of Edinburgh, an eminently useful institution; L.50 to the Royal Edinburgh Lunatic Asylum; L.50 to the Destitute Sick Society of Edinburgh; L.50 to the Deaf and Dumb Institution; L.50 to the Asylum for the Blind; L.50 to the Phrenological Society of Edinburgh; and L.20 to the Model Infant School in the Vennel. I select these as institutions about the utility of which there can be no doubt, and because they are not so well supported as they ought to be by the public. I ought to add that I make these bequests from no love of ostentation, but from a strong sense of duty. During my life, my health was always so

\* Only the two paragraphs descriptive of Dr Combe's character, and which we have extracted above, are from the pen of Mr Chambers.—ED. P. J.

precarious as often to make it doubtful whether I should be able to earn a subsistence or be able to lay up any thing for my support in case of being long incapacitated for practice. I was therefore obliged to lay out less money for charitable purposes than I ought to have done, and the only compensation in my power is to bestow for similar purposes that which would have come with a better grace during my life." It is but justice to Dr Combe to say, that, although his expenditure for charitable purposes was less than he desired, yet he was, for many years past, a liberal contributor to the funds of benevolent and useful institutions, besides responding with alacrity to all private claims upon his bounty. The amount of personal trouble, also, which he often took on behalf of those whom he thought he could be of service to—and this even when he had little strength to spare—was such as to excite the admiration of all who were aware of the circumstances.

Though endowed with all the gentle qualities and domestic affections which render the married state agreeable, Dr Combe scrupulously refrained from matrimony, and would not have reckoned an opposite course the less culpable because sanctioned by a clerical benediction. His motive will be obvious on perusal of what he has written about hereditary transmission of disease.\* Except for the reason alluded to, he must long ago have ceased to lead a single life. Indeed, one of the striking features of his character was his attachment to, and sympathy with, women of intelligence and refinement. He counted many such among his intimate friends; and while he rejoiced in their society, he was ever ready to sympathise with them in their joys or sorrows, and to aid them with his counsel. The sacrifice of enjoyment which he made, at the call of what he considered to be duty, in leading a single life, will be best appreciated by those who knew him most intimately.

Dr Combe was fond of harmless mirth, and possessed no inconsiderable talent for humour. In the domestic circle this quality displayed itself in streams of good-natured jocularity, and in his familiar correspondence the coruscations of his wit were frequent and effective. He was fond of children: and some who read these pages will remember the heartiness with which, in their early youth, they used to shout with merriment at the "funny faces" he made for their amusement; and the storms of glee that arose when, feigning unconsciousness, he allowed a regiment of his little friends to carry him in procession through the room, on the floor of which

\* See *Physiology applied to Health and Education*, ch. x., p. 293; and *Management of Infancy*, ch. iii., p. 17.

they would deposit their somnolent and rigid burden, celebrating their achievement by dancing and shouting around it.

His talent for languages was not so great as to make him love their study for its own sake. He could speak fluently French and Italian, and latterly acquired sufficient knowledge of German to be able to understand didactic works in that language without much difficulty. He was fond of the English classics, among whom our great Dramatist held the highest place in his estimation. In re-perusing the plays of Shakspeare, he constantly saw fresh reason for admiration of the profound knowledge of human nature, and wonderful power of terse and accurate description, which they display.

There is a good portrait of Dr Combe, painted, in 1836, by Mr M'Nee of Glasgow. About 1832, Mr Lawrence Macdonald executed a miniature bust of him, several copies of which are in existence. There is also a daguerreotype likeness of him, taken a few years ago in London.

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*Report of the post Mortem Examination by Dr John Scott.*

The skull was remarkably thin and regular in its walls; the internal surface more deeply marked by the bloodvessels than usual; the brain exceedingly healthy.

The thorax was much contracted on the left side, especially on the superior part, measuring fully two inches less than the right, and being flattened and depressed under the clavicle and the two first ribs. On removing the sternum, the *right* lung was found very large, passing to the left side of the sternum and filling a space in the left side of nearly two inches in breadth, and three in length. The right lung itself was adherent to the pleura costalis by scattered and firm adhesions. The lower surface was more especially attached to the diaphragm by very close adhesions. The lung in its texture was in some places, especially towards the lower part, congested, but everywhere pervious to air, and without any tubercles. The bronchial tubes were firmer and larger than natural.

The *left* lung was contracted to a very small size, and adherent by very thick and strong false membranes, especially in the summit to the ribs, the adhesions were so strong that the lung was with difficulty removed. The summit was particularly indurated and infiltrated with black matter, but without any change in its structure. It also contained many large and small caverns. The lung was without any tubercle or cretaceous matter. The surface was black, and this colour



was found to pervade the pulmonary texture generally; the cellular appearance was, however, still visible. The upper lobe was dense in structure and hollowed out into numerous caverns opening into each other in some instances, in others single and of smaller size. These extended from the summit of the lung, and chiefly occupied the anterior part, and opposite the first and second rib. The bronchial tubes, some of a large size, opened directly into the caverns and were continuous with them. The longitudinal fibres in the larger bronchial tubes were particularly strong, and the circular ones in the smaller. The caverns themselves were remarkably regular in shape, especially when single, and were lined by a fine, smooth, thin membrane. The opening of both small and large bronchial tubes was easily perceived in them; they were more generally dilatations of the extreme terminations, than merely dilatations, of the large bronchiæ. There was no emphysema.

The lower lobe was fleshy, pretty firm, but retained more of the natural appearance than the upper. The heart was large, but not diseased. The kidneys seemed natural in structure, but were filled with a greyish-coloured thick fluid. The colon and rectum were thickened throughout, and covered with minute ulcerations, some very small, and others of considerable size. The muscular and mucous coat of the rectum was thickened.\*

*Report of the Examination of the Skull and Brain of the late Dr Andrew Combe, by Dr Handyside, F.R.S.E.*

A. THE CRANIUM.—I. TEXTURE thin, the tables having closely coalesced; excepting, *1st*, at the frontal sinuses, which are large and well developed; and, *2dly*, on both sides of the longitudinal sinus, where the inner table of the cranium is opened up in texture over a greater extent than is usual.

II. REGULARITY and SYMMETRY remarkable, excepting that, *1st*, on the left side of the vertex, the cranium is quite diaphanous; *2dly*, the area of the cranium to the left of the mesial line is greater than on the right side; and, *3dly*, the internal occipital protuberance and the crucial and lateral grooves on the two sides, are unequal in form and bulk.

B. THE ENCEPHALON.—I. GENERAL FORM a regular ovate;—*1st*, the longitudinal and oblique *fissures* are very deep,

\* The examination was made about thirteen hours after death. A cast of the head was previously taken, and afterwards a cast of the brain. The remains of the deceased, with the exception of the cranium and its contents, were interred in the family burial-ground in St Cuthbert's churchyard, immediately behind the manse.



including a greater number of secondary fissures in the latter than is usual: depth of longitudinal fissure at splenium of corpus callosum,  $2\frac{1}{2}$  inches; depth at genu of corpus callosum,  $1\frac{1}{2}$  inch;—2dly, the *sulci* (anfractuositities) deeper than usual; greatest depth in left hemisphere,  $\frac{3}{4}$  inch; depth in right hemisphere,  $\frac{3}{4}$  inch;—3dly, the *lobes and lobules*, and other anatomical features of the encephalon, very strongly marked.

II. PROPORTION. 1st, the left side of the encephalon the greater;—2dly, the corresponding *gyri* (convolutions) of the opposite sides approach more to symmetry than usual.

III. BULK. *Greatest Length*, 7 inches. *Greatest Breadth*,  $5\frac{1}{4}$  inches. *Greatest depth*, vertically to base of inferior lobe,  $4\frac{1}{2}$  inches—vertically to base of cerebellum,  $4\frac{1}{2}$  inches.

IV. WEIGHT (including pia mater). 57 oz. avoirdupois, [being about 7 oz. above the average;—in Dr Chalmers 53 oz., Dr Abercrombie and Baron Cuvier, each 63 oz., and Baron Dupuytren, 64 oz.]

V. STRUCTURE, perfectly normal, including the membranes and vessels. The cineritious matter is about a third narrower than usual, and devoid of the internal translucent pearly laminae frequently observed. The encephalon in general is remarkable for its firmness of texture.

## II. NOTICES OF BOOKS.

- I. *English Life, Social and Domestic, &c., considered in Reference to our Position as a Community of Professing Christians.* By the author of "Reverses." London: B. Fel-  
lowes. 1847. Post 8vo, pp. 218.

We are not in the secret of the name of the author of this work, and commenced the perusal of it, not doubting that it proceeded from a writer of the sterner sex. Indeed, the preface states that "the writer is a member of an Irish Relief Committee," which seemed to imply the masculine gender. But as we advanced we found great intellectual endowments chastened, but not enfeebled, by delicacy and softness; much intimate knowledge of the nature, position, duties, and feelings of woman, in her capacities of daughter, sister, wife, and mother; and so large an infusion of true, warm, and affectionate sentiment,—that we arrived at the conclusion that it is written by a lady. Be the case as it may, the author displays a rare union of the qualities necessary to produce an excellent and instructive book. A sincerely religious, yet cheerful and charitable spirit, an intimate acquaintance with the circles of fashion, familiarity with the manners, mo-

tives, and modes of thinking of high life, and experience in the spheres of duty as well as of amusement, are conspicuous in the work. To enviable talents for composition must be added the command of a sound analytic philosophy; while practical good sense, and a real knowledge of the subjects treated of, meet us in every page. This is high commendation, but we invite the reader to put our discrimination to the test, by perusing the book, and forming his own judgment of its merits.

The work consists of two parts. Part I. relates to "English Life;" and the object of the author is to inquire to what extent the modes of that life, in the social and domestic circles, are in harmony with the principles of professing Christians. "The World," or social recreations, are first treated of. "Religious persons," says the author, "have been more divided on the subject of what are called the amusements of the world—involving, as they do, many of the habits of social life—than perhaps on any other." The decision given is, that music, dancing, card-playing, and theatrical entertainments, not only are not necessarily incompatible with the Christian character, but may all, in proper forms and degrees, promote its growth, by affording wholesome and necessary recreation to the mind. Having stated this opinion, however, the author freely exposes the prevalent *abuses* of these social pleasures, and firmly, but without bitterness, condemns them. An eloquent and touching appeal is made to the aristocracy, to bring the evils described to a close. Five hundred fashionable equipages, employed from eleven o'clock at night till four or five in the morning, in carrying their owners from party to party, keep at least one thousand servants during this interval in the streets, or drinking and gambling in low taverns opened for their accommodation; "while as many persons more at home are deprived of their natural rest at its natural season, and are perhaps seeking their amusements in a way not less dangerous to their moral characters. Many a young lady's maid owes her ruin to the hours in which she is thus left, with no definite amusement, with no companion, or with the companionship only of the head of the establishment, or the valet, who has himself probably been trained in this school of nocturnal dissipation; and many a sad story has reached our ears of fearful evils involved by such watchings, on young and thoughtless and unprotected women; for this is no merely probable supposition—dismal facts lie beneath."

The remedy suggested is, not to abandon the amusements, but to pursue them at more suitable hours. The sufferings of dressmakers, also, are alluded to in connection with the

same subject. We have been told that in London it is no uncommon practice, in cases of emergency, to compel young women engaged in this employment to work all night; and in order to prevent them from falling asleep, they are forced to sit on the floor without support to their backs. The uneasiness of the position keeps them awake!

The remarks on the theatre and opera are excellent. The author, while approving of both, under proper management, is constrained to declare open war against the ballet.

The next topic embraces "our social relations considered in reference to ourselves." "A stranger to our modern entertainments would probably be surprised, on a first introduction, at the want of *gaiety* which pervades them. In spite of splendid apartments, brilliant lights, flowers, pictures, statuary, crowds of well-dressed people, beauty, youth, and grace, some element of enjoyment seems to be wanting." The explanation given is, that these re-unions involve too much anxiety and forethought to almost every one who mingles in them. The entertainer finds the arrangements for a ball an anxious and laborious undertaking; "the young *debutantes* feel that they are themselves part and parcel of the spectacle; that their dress, their dancing, and their general appearance, are unsparingly criticised by persons known and unknown to them." These feelings subside before the end of the first season; but the very fact of the young dancers being in their own persons objects of unsparing criticism involves many important consequences, for a statement of which we must refer to the work itself. Balls involve young persons also in much anxiety about their dress, the expenses of which absorb often all their resources, and oblige them to leave the claims of charity, and even of justice, unsatisfied.

"There are, however (says the author), other and graver cares connected with a ball than those we have alluded to, which impart to it a serious frivolity, and rob it of all really social elements and simplicity of purpose. Well-dressed, well-introduced, mistress of the science of dancing, and self-possessed in the practice, the young *debutante* is nevertheless far from security in the prospect of her evening's amusement. Much depends on her personal attractions; more on her being the fashion in the circle to which she belongs; and much still, on sundry frivolous and scarcely tangible circumstances. Hence arise temptations to vanity and self-conceit, to jealousy or discontent, which impart a dangerous character to the entertainment."

"There is still another evil involved in this amusement,



viz. that it gives the sexes unequal advantages." "Young women are placed in a false position with regard to the other sex, inasmuch as they are dependent on the young *men* present for the amusement of the evening." "The young gentlemen of the party are fully conscious that those young ladies only who are sought *by them* can share in the amusement; so that the power of influencing or suppressing their amusement for the evening does in fact rest with them." "If the young lady happens not to be much acquainted with the set she meets—if she be not considered attractive, or fashionable, or agreeable, or any of those things which constitute what is called in modern phraseology a nice girl, she is exposed to the mortification, not only of sitting down all the evening, but of feeling and knowing that others perceive her to be in the awkward and embarrassing position of one unsought among her compeers." "There is another unpleasant fact arising out of this false position in which the sexes are placed with respect to this particular amusement, that the emptiest coxcomb, who has position in society, has it in his power, under certain circumstances, to mortify the most charming girl in the room, by subjecting her to his caprices."

The remedies suggested for these and other evils enumerated in the work are, to circumscribe the numbers and increase the moral respectability of those who constitute the company at balls; to abridge the ostentatious style of the entertainment; to introduce greater simplicity into the dresses, and greater ease into the manners of the dancers; moreover, that "it should be considered suitable for ladies to dance together if they please;" and that "the lady of the house should take a more active part in arranging the details of the amusement." An excellent answer is given to the objection that "gentlemen would not attend parties so arranged as to rob them of some of their privileges," but we have not space to enter into it.

The next topic is one of great importance and delicacy, and it is admirably handled. "Foreigners justly reproach us," it is remarked, "with the fact that while we sneer at their *mariages de convenances*, we adopt (too many of us at least) a means towards the same end, by which we essentially compromise both the dignity and delicacy of our daughters and ourselves. I fear the reproach is just; and I think that their mode of settling the alliances which they desire to form, is, if not the best means of securing the happiness of the parties, far less to be deprecated than the avowed system of match-making which prevails among ourselves, and which



leads so many mothers to make the amusements of their daughters subservient to schemes for establishing them—often, it may be feared, to make the daughters themselves parties to such schemes." In treating of this subject, the knowledge of fashionable life, the religious earnestness, the powers of philosophic discrimination, the practical good sense, and the general liberality (not laxity) of the author, are conspicuously displayed.

The next subject is the "Influence of Fashion," and in treating of it also the analytic philosophic talent of the author carries the reader to a clear perception of what fashion is, and what it is not. The practical conclusion is, that "Fashion being herself a sort of spurious public opinion, she is often obliged to yield to the true one—to the collective voice, *i. e.*, of society at large. And the circumstances of the present age (as has been remarked) afford such prompt expression and circulation of tastes and sentiments, that this great public censor is enabled to exercise a wholesome control over the shadowy representative. So controlled, indeed, it is conceivable that fashion herself might exercise, not only a harmless, but a useful influence in certain matters which, as they link society together, cannot be wholly disregarded." The author adds, and we think with good reason, "that the general increase of intelligence and cultivation has found its way into the highest ranks of society, while their elegance and refinement have, in return, been more than equally diffused through those below them." "The exclusiveness of fashionable society has thus been in a great measure broken up, both in our own country and (more entirely) in France—the inevitable consequence of the higher state of civilization to which our two nations have arrived."

There is an excellent chapter on "Associations for promoting benevolent and religious purposes," in which some useful truths are well expressed. Prayer meetings and Bible meetings "are too well known often to degenerate into coteries for what may be called spiritual gossip." "An association for mothers to pray for their children seems still more unsuitable. The scene of their duties must surely be their home. Christian mothers pray in private for these dear ones—they pray with their husbands—they pray with their families." It is added in a foot-note, "This society has lately ceased to exist."

Part II. of the work includes "Marriage," "Single Life," the educational "Influences of the Age," "Home Influences," and "Private Influences on Society." From these chapters

we select a few passages on the subjects most appropriate to our pages :—

*Education in the years succeeding Infancy.*—"In the years succeeding infancy, varieties of temperament, of tastes and faculties, and also the period of their respective development, demand our careful attention. In some children, the knowing faculties being full and active, while those connected with the reason are ill-developed and languid, and *vice versa*—they require very different treatment. To direct towards suitable objects, but not to over-stimulate, the faculties to which nature has given fulness and activity, and to excite and bring into action such as are more feebly developed, seem to be among the most important subjects of attention at this period of education, and they are subjects on which Phrenology,—from the light it has thrown on the workings of the mind,—promises to afford most important assistance. Such attention will shew what accomplishments, and what branches of knowledge may be cultivated with probability of success; and hence, much time, and labour, and patience, and much also of actual suffering, spared to the unfortunate pupils who may have been destined to excel in *all* elegant accomplishments and knowledge.

"The attempt to make the act of learning easy and amusing has been one of some years' standing; but it is usually found, I believe, a failure; for though the *results* of learning may be made interesting, and a taste for literature and science cultivated in young minds by suitable books and interesting conversation, yet there must always be a considerable portion of dry labour in the act of acquiring knowledge; a labour which we vainly attempt to save our pupils, and which is, in fact, good discipline to their understandings. By lifting them over the ground, as it is called, they *appear* to make progress, but after all our pains they will be found not to have really learnt their way, nor to be capable of finding it again if left to themselves; those only can do this, who have made every step sure; and those only who have done this, can be said to have made real progress. It is on this account that examination bears so important a part in education, because it not only enables the teacher to test progress, but the pupil to be sure of what he really knows. No young people will read with energy, that of which they feel they have no account to give; and a much smaller portion of any given subject studied under this responsibility, will be found more available than any amount of reading without it, because the necessity of re-producing will have obliged the student to master his subject and make a lodgment of it in his mind. The want of this mode of teaching, or the carelessness with which examinations are conducted in a school-room, accounts for the fact, that the knowledge which girls acquire is so often a mere smattering, while most boys retain from their school course, a certain portion which remains by them in after-life."

*Choice of a Profession.*—"It seems to be the present opinion, that it is very important for a boy to choose his own profession; though not only does this entire freedom of choice frequently involve great difficulty to a parent, but there are other practical disadvantages connected with it; for, in consequence of a want of self-knowledge, as well as of worldly knowledge, those who are left entirely to their own choice, often lose the best

years of life before they have made up their minds on the subject ; and the cross influences which occur after a young man has grown up make it then a still more difficult one. There is, however, usually a bent, or, at least, a manifestaion of certain tastes and talents, during boyhood,—often during early boyhood,—which a parent does well to mark, (and will usually have cause to regret if he disregard) as indicating the particular profession or business best suited to his son. The Church will, of course, be excepted ; or rather, the views of a parent towards this profession will be suspended ; because, even where a strong bent to this sacred calling exists, no parent, and no young man himself, can judge of his general fitness or qualification for it, till a later period. There seems to be rather too much importance attached, in the present day, to the *choice* of a profession, by several classes of persons. Some think that certain professions only are suited to a gentleman ; others, that certain occupations only are fitted to men of good attainments and superior minds ; and others, again, consider the choice of a profession as a sort of religious act, and a bent towards it a kind of sacred call. The first opinion is founded on a prejudice rapidly yielding to the circumstances of the age we live in ; unsuited to a commercial country like our own, and one which our aristocracy themselves have not felt inclined or able to maintain. The second is one which, through the diffusion of education, has a tendency to become more general instead of diminishing. The third seems to be founded on a mistaken view of the purposes for which a profession is chosen : for those persons who consider it as a sacred act, forget that the selection of a profession is, with few exceptions, neither more nor less than a choice of the mode in which a man shall earn his bread. It being the will of God that the mass of mankind shall labour for their subsistence, either by manual or mental exertion, or by both, it would seem that the *mode* (with one great exception,—the Church) must be unimportant, unless it should involve temptations or duties which are likely to injure a man's moral or Christian feelings. It is as a citizen of the world—a member of the social and domestic circles,—not as the member of a particular profession, that a man's most sacred calling is marked out for him ; though, of course, each profession has its own duties, to a faithful discharge of which every one who adopts it is bound. Again, to reject, as in the second case, all professions which are not in themselves tasteful to a young man, or calculated to expand his peculiar endowments, however the circumstances of his situation may point towards them, seems to be a tendency of the age, resulting from the general diffusion of education, and consequent sharpening of men's wits, which renders so much larger a class of persons available for the more intellectual professions. This may grow into a serious evil. If young men of good attainments and intelligence should feel that they cannot submit to earn their bread in a vocation which does not immediately call forth their powers, we shall, in process of time (but, that necessity has no choice), have no unskilled labourers among the lower classes, nor will men of education and intelligence among the higher, be found to fill up the dry and business-like departments of life.

“ That ‘ the man should adorn the profession, not the profession the man,’ is a very valuable maxim, and one which may well reconcile a young man to his lot, wherever that lot may be cast. In point of fact,



when the profession is not such an one as to engage deeply all the powers of the mind, he is in a better position for devoting his disengaged moments to more important purposes ; and consequently some of the most useful and influential members of society have been those whose own professions have afforded little scope for the development of the higher powers of mind. That our sons should carry from the homes of their childhood the elements of a good citizen and domestic man, is, indeed, a point of far greater anxiety than any which connects itself with the particular profession they may adopt."

*Example and Precept.*—"In the last years of educational life, we teach much more by example than by precept ; and at no period of life are young people quicker to understand and discern the realities of things, than in that now before us. They may be schooled and taught that so and so is right,—that we *ought* to do this, and believe that, and love the other ; and their assent to all this may be honestly given ; but the mere abstract truth of each proposition makes no lodgment in their minds, until it has been embodied by some fact in the life and practice of those around them, or unless it is tested by their habitual course of action."

*The Desire of Pleasing and the Desire of Giving Pleasure.*—"The desire of pleasing, harmless in itself, and doubtless answering some useful purpose in our organization, requires, in its healthy state, no more stimulus, than does the desire of taking food in a person of good appetite ; repletion, from its too great activity, being the only evil result to be dreaded. But another,—in truth very different, though seemingly similar—the love of giving pleasure, may be indulged without fear. The former, though connected with others, is eminently egotistical ; the latter truly social. A young woman, in whom benevolence—the love of giving pleasure—is strong, forgets herself in others ; she in whom the love of pleasing is the active principle, sees herself in every one. Whether she walks across a room, talks, laughs, or sighs, she is herself the reflected object of every act and emotion ; and her pleasures depend upon the effect she produces, or supposes herself to produce, on others. This state is thoroughly unhealthy ; as injurious to the mind as to the manners ; and destructive of the refreshing influence of social pleasures. She, on the contrary, whose desire of pleasing is under due control, subordinate, i. e., to the desire of giving pleasure, and who is therefore occupied with others rather than herself, is really in the best position for the full and tranquil enjoyment of the sources of amusement which lie open to her, undisturbed by the mortifications of disappointed vanity, or by its more dangerous satisfactions."

*Treatment of the Poor.*—"In reverting to other private influences, and especially to those connected with the poor, we are reminded of a class among the gentry, less numerous than of old, but still far from extinct,—the Lady Bountifuls of former days,—whose connection with the labouring classes does not seem calculated to promote their independence or advancement ; benevolent persons, who seem to regard poverty as an essential quality, rather than as an accident ; and who, therefore, considering the poor as an inferior race of creatures, think for them, act for them,—(thus



cherishing their supposed incapability of thinking or acting for themselves),—expect unbounded submission from them, and, in return for this submission, give plenty of broth and blankets. If we wish to raise our poorer neighbours to an enjoyment of their share of the blessings of independence and enable them to partake in the general advance of civilization, we must not treat them like children; we must not force them (I mean by setting a bounty on acquiescence) to act, think, and amuse themselves as we think best. We must not keep them in leading strings, as the Jesuits did the Paraguay Indians. An intelligent poor man, if we can induce him to think-out his own ill-defined notions, and use his own experience, can usually judge of his own affairs better than we can. Our superior information and more cultivated judgment, may indeed be a valuable aid, and therefore our advice may be most important to his best interests; but it does not seem just that it should be forced upon him; and especially it does not seem consistent with a proper sense of our mutual relations, that we should, as his benefactors, assume, in our way of speaking on subjects which concern him alone, that tone of authority, which, in other relations of life, would be considered, on that very account, unbecoming."

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II. *Select Writings of Robert Chambers.* Volumes I., II., III., & IV. *Essays Moral, Economic, Philosophical, &c.* W. & R. Chambers, Edinburgh; W. S. Orr, London. 1847. Post 8vo.

We contemplate with much satisfaction these goodly volumes of the original lucubrations of one of the gifted men of the age; collected from their dispersion in many more volumes of a periodical which owes much of its well-earned celebrity to the same writer. It is comfortable to see so much pleasure and instruction thus brought to one's hand; and, to the scattered wisdom which has delighted and contributed much to humanise a generation, a substance given for endurance,—

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"to inform the page  
With image, beauty, sentiment, and thought,  
Never to die;"

for if ever there was a work entitled to take its place among English classics, it is these selections. When the *Essays* came out occasionally and singly,—generally as "leaders" in the numbers of *Chambers's Edinburgh Journal*, struck with the deep and extensive knowledge they manifested of men and things, and the clear and indisputable lights in which they placed human thoughts, feelings, and actions, in a range of relations that seemed boundless, the reader often wondered at the exhaustlessness of the mental stores which the author

displayed. But now, when they are concentrated in volumes all their own, the extent and variety of the author's contributions towards human enlightenment, improvement, and pleasure, are truly surprising. To us they possess an additional interest, in as much as they owe not a little of their truth to nature, to their having a basis in Phrenology, and almost in no case offend against its principles.

The first two volumes are entitled *ESSAYS FAMILIAR AND HUMOROUS*. The papers composing them did not appear in any settled order, or according to any system, but occasionally, like those of the classical essayists of the last century; and each as it appeared was welcomed by the readers of the *Journal*, and talked of as placing even familiar things in so new and attractive a point of view, as to operate practically in improving both the judgment and feelings of the reader. Nothing contributed more to their popularity and effectiveness, than an occasional clever choice of a brief title—for the most part one remarkable word—which became a convenient byword, and was never repeated without recalling the useful view, or the striking picture, or the humorous sketch, which was embodied in that one expression. Nay more, the words themselves were readily adopted by the public, and many of them are now current in society, as conveying a concise lesson of prudence and practice. No reader of *Chambers's Journal* can forget the popularity of such papers as *Victims*, *Supplementaries*, *Downdraughts*, *Riding off*, *The Poco*, and others of the same character, which portray to the life various forms of human weakness, folly, knavery, or cunning, and hold them up as so many beacons and guards of great importance in the progress, but especially the outset, of life. The *Essays* contained in these volumes constitute a whole code of prudence for the direction of common life; with an inimitable vein of drollery, remarkably characterised by its kindliness and absence of all causticity or ill-nature, and having in it not only a forbearance truly parental for the folly it chastises, but a spirit of benevolence towards the delinquents, which would rejoice sincerely if they were but wiser. There pervades all the *Essays* an honest single-hearted kindliness, which we should be tempted to call *bonhomie*, but for the acumen with which it is combined; and an aspiration after human good, a brotherly love, which needs not to say, in words, that the writer's *summum bonum* would be to contemplate, but yet more to aid in realising, a state of human affairs in which all were in the enjoyment of health and competence—in which all were good and all were happy. There is a moral sunshine in such writing, in which

every right-feeling mind loves to bask ; contrasting strongly with the cold-hearted selfishness which chills with its bleak shadow so large a surface of life. Another amiable trait, here often met with, is the genuine expression of the domestic affections, and of none more strikingly than the love of children. These the author views not as burdens but as blessings, which, prayed for as they are by others in reasonable moderation, are by him welcomed on the maxim of "the more the merrier." If they come in pairs, and not by the slow process of one at a time, so much the better ; and he has given various weighty reasons why the "many-childed" are a much more highly favoured class than their opposites, with quieter nurseries. "The House of Numbers" is an inimitable sketch in this vein. "No-childed and Many-childed" is another, which no one can read without the strongest feelings of sympathy. We quote its conclusion, which is a piece of beautiful writing.

"To rear a numerous progeny through all the various stages, and finally set them forward in life, is unquestionably a task of considerable difficulty, and attended with no small degree of anxiety. Yet, if circumstances be not singularly unfavourable, so as to produce real trouble and sorrow, there can be no doubt that the effect of such a duty upon the mind is highly beneficial. The domestic relations are of immense importance in developing and keeping awake the affections. We can scarcely be afflicted with hardness of heart towards any benign sentiment, if we have known what it was to be brother, husband, and father. Women are peculiarly liable to be improved in general humanity by having children. When a mother of young infants passes a little child who has been left neglected upon the street, she cannot rest till she has seen it attended to ; the no-childed would never have remarked the circumstance. When the mother of a set of roistering boys passes a merry group of the same order, she is almost sorry that decorum will not allow her to linger beside them, to survey their sports and bless them with a mother's blessing. If, advanced in life, she has seen some of her sons leave her for distant climes, should her path be crossed by the homeless vagrant, who looks, but does not speak a petition, she thinks that there may have been, or still may be, some one to whom he is as interesting as her own child is to her—or that her own child may one day appear to some other mother as this wretch now appears to her—and she extends to him the hand of melting charity. Thus does nature, by an abundant flow of her finest sensations, remunerate those whom she has called upon to perform what many calculating people would consider a disproportionate share of her duties."

We must pass over the third volume with its *ESSAYS MORAL AND ECONOMIC*, but not without strongly recommending it to be read and re-read by all who would wish to improve in the practical wisdom of life. It is impossible to peruse with due attention such essays, for example, as Lei-



sure, Intentions, Punctuality, Sincerity, Will-Making, Long Engagements, Enemy-Makers, The Illiberal, The Duty of Good Health, Ideas respecting Self-Esteem, Warlike Talk, Vulgaritv, and many others in the volume, without receiving lessons imparted in so happy and impressive a style as to be indelibly fixed in the mind. It is out of our power to extract portions to suit our limits, from dissertations which can only be appreciated when read without pause from beginning to end.

The fourth volume, entitled *ESSAYS PHILOSOPHICAL AND SENTIMENTAL, AND HISTORICAL SKETCHES*, is, in its first two classes of subjects, more immediately within our scope. An essay on 'The Beautiful has the lead in the volume. This is one of the author's productions which take their character from his conviction that the phrenological analysis of mind is the true standard to which many a well-vexed question in the world of philosophical speculation must in the end be brought to be solved. Every one at all conversant with English literature must be familiar with the brilliant essays by Mr Alison and Lord Jeffrey, which maintain, and have extensively propagated, the strange theory that there is no such thing as beauty as a quality inherent in objects, but that the emotion—the delightful emotion—which things and scenes called beautiful occasion, is the effect of other feelings and ideas of a pleasing kind, associated with the objects contemplated. Colours, forms, sounds, say these philosophers, are beautiful by association alone. The phrenologists successfully assailed and overturned this theory. They have demonstrated that there are mental faculties to recognise and feel beauty, which last must therefore exist as a quality in external objects.\* Mr Chambers takes the same view, and exposes the association fancy with much humour; establishing that flowers really *are* beautiful, "and no mistake;" that a pretty girl *is* a pretty girl, an object of real, and not ideal association; that architecture and scenery, the rising and setting sun, speak direct to our faculties of Form, Colouring, and Ideality, by and through qualities of their own; and that, while brilliant colours draw exclamations from infancy, and fine music extracts money from riper years, neither the child nor the adult dreams of invoking any ideas whatever, beyond keeping their eyes and ears open. The essay has the following fine and true conclusion:—

\* For a full discussion of the subject see Sir George Mackenzie's work, entitled "The Theory of Taste, founded on Association, Tested by an Appeal to Facts," (reviewed in our 3d volume, p. 437), and Mr Combe's "System of Phrenology," i., 482; ii., 40, 54, 62.



"It is melancholy to think of the great misexpenditure of talent and eloquence upon this subject, and the great extent to which the original delusion has affected the judgments of the higher class of reflecting intellects during the two last generations. Even yet, the theory of association is that which would pass current in a university or any other authoritative quarter, while the true explanation would be regarded as a most un-scholarly heresy. But, fortunately, error is necessarily of a transient nature, and truth ever tends to a mastery. While the men who were brought up in this delusion continue to live, the prestige of their names will probably keep it more or less in vigour; but it will perhaps be their fate, even before they leave the stage, to see their favourite doctrines beginning to be generally condemned and forsaken; and very surely, ere they have long been withdrawn from the scene of life, all the elegant writings by which the delusion has been supported, will be swept aside as only so much rubbish, though rubbish sparkling with the fragments of fine thought."

The Essay in which, under the title of "Monomania," the author treats of moral insanity, is also phrenological; for to Phrenology must be ascribed that clear light which has been shed on insanity as affecting more or fewer, often only one, of the mental faculties. This excellent essay is calculated to do much popular good, especially by enlightening the minds of jurymen. Indeed, when, what the essayist calls, and with truth, "the old dotard idea," that there is no insanity but a blind fatuity which cannot distinguish right from wrong, and that a madman *must* be violent and outrageous, still disgraces the judicial bench, and lingers in the Legislature, it is the more urgent that the general public should be indoctrinated to take the lead, and so to re-act upon our law-makers and law-dispensers, that, while the dangerous insane are properly secured and restrained, the atrocious act of capitally punishing the irresponsible, which has too often outraged humanity, may be heard of no more. But indeed, there is already progress. Too much has been written on the subject not to have reached these high latitudes, and given our rulers pause. Thirty years ago, Bellingham was hanged; lately, M'Naughten was sent to a lunatic asylum. The like change of views has appeared in many other trials. It is a long-established phrenological doctrine that the kinds of insanity are nearly as numerous as the faculties. We need not detain our readers with shewing this to be true. But the essayist addresses a wider circle than we do, and has performed the task efficiently. We are particularly pleased with his severe rebuke of the truly savage cry yet too prevalent, of "Hang all madmen who commit murder."—With respect to *acquisitive* insanity, Mr Chambers writes:—

"It may be a good subject for a jest, that theft in a poor person is theft, but in a rich person monomania.\* But there cannot be the least doubt that many persons in easy circumstances, and otherwise rational and moral, have been addicted to taking the property of others, simply and expressly through the influence of disease. Dr Prichard knew a patient in an asylum who would only eat that which he had stolen, so that it was necessary to place his food in such a way that he might furtively possess himself of it. This I adduce to shew the feeling in its worst state of disease. Mrs May Drummond, a lady of fortune in the middle of the last century, was a person of the highest moral nature, insomuch that she devoted herself to a mission in order to raise money for the building of an infirmary, which her brother, the chief magistrate of Edinburgh, had projected in that city. Yet this amiable being could not refrain from putting the silver spoons of her friends into her pockets when present at any of their entertainments. It was a propensity which she could not resist. Her case is the type of many others which are occasionally heard of in society. Sometimes the unfortunate person is so sensible of the habit, as to have a domestic instructed to search for and return every appropriated article. Now, we can readily allow, that to admit this explanation in certain cases, might introduce difficulty in the whole treatment of larceny, and, unless strong precautions were taken, prove a negative temptation to persons who had no such excuse. But yet it is only justice to make a distinction between deliberate sordid theft and a habit in which none of the usual motives of theft are present, and where the whole is the effect of a visitation of disease by the providence of the Almighty. If this distinction is not to be made, how can that with regard to the age of an offender be admitted? It is a distinction, of course, which ought to be made in favour of the poor as well as the rich, when the evidence of disease can be established."

We would recommend to attention an excellent essay on the kindred subject of Crime in the same volume. Among other classes of criminals, the author treats of that small minority, who, by reason of a great preponderance of the organs of the propensities over those of the moral sentiments, are by nature extremely prone to acts of violence. But, that from this relation between dispositions and cerebral development, we are necessarily to conclude "that Nature herself produces ready-made criminals, does not," says he, "seem to me so clear."

"Our best feelings revolt from such a conclusion, and with good reason; for the idea is inconsistent with all that we know of the designs of the Author of nature. How, then, are we to reconcile with these designs the admitted fact, that there are brains which more readily fall into crime than others? Simply on this principle, that in the business of the world there is much rough work to be done, many coarse obstacles to be overcome, many noxious things, or things which, in their degree, or the cir-

\* See "Nicholas Nickleby."

cumstances in which they exist, become noxious, to be put an end to, or thrust aside. There is need for the butcher, the pioneering backwoodsman, the exterminator of vermin, as well as for the gentle scholar, and the ingenious artist. The gross brains may be supposed to have been fashioned for the performance of duties like these; and, with a right system of social arrangements, they would be solely applied to such purposes, and, expending their energy thereon, be innocent with regard to all other things. This is a view which may any day be subjected to the test of experiment. Take any man with destructive tendencies, such as generally become criminals, and, putting a proper instrument into his hand, set him to the clearing away of brushwood, and he will be found at the end of his task to be much tamed. The enormous superabundant energy given him by his large posterior lobe will have exhausted itself, and he will be as happy and peaceable as an ordinary tradesman at the end of his day's traffic. The master of a deaf and dumb institution in America, who was troubled with an inmate whom nothing could keep from breaking furniture out of pure mischief, set him at length to the cutting up of wood for firing in the cellar, and thus effectually subdued the inclination. It may be held, then, as a chance misapplication of this class of brains, when crime is wrought by them. Society ought to keep these persons employed in such a way, and under such circumstances, as to save them from the risk of expending their energies criminally, and it would then not suffer from them. For the finely poised moral brains to take the coarse and ill-balanced ones by the nape, and punish them for what is to them as natural as it is for the good brains to dictate the most generous acts, appears such an anomaly, that I altogether despair of finding terms that can be fitly applied to it."

Mr Chambers refers to Mr Sampson's work on *Criminal Jurisprudence, considered in Relation to Mental Organization*, as the source from which he has derived some of his arguments; but he "claims as originating with himself," the views above quoted, "respecting the final cause of what has come to be called the criminal type of head."

We are arrested by a very able phrenological essay on "Bad Temper," of which the author acknowledges that he owes the philosophy to "a theory which was first explained in a satisfactory manner by Mr Robert Cox of Edinburgh, in a series of articles which appeared a few years ago in the Phrenological Journal, under the title of 'Observations on the Mutual Influence of the Mental Faculties, and, in particular, on the Modes and Laws of the Activity of Destructiveness.' " The theory is brief,—that all disagreeable sensations and emotions call Destructiveness into activity, and that the uneasy feeling and malevolent inclination together constitute bad temper. The author draws the following practical conclusion from the theory:—



"It seems reasonable to hope for some benefit from this philosophical view of the present subject. Bad temper in one party is the constant cause why much bad temper is in others; for, being always disagreeable, its manifestations are almost sure to occasion irritation. Perhaps this effect would not so often take place, if the well-constituted and placid were to look upon such manifestations as the result of either actual bodily pain, or at least disagreeably-affected mental faculties, in those from whom they proceed. A feeling of pity would rather, in such a consideration, be due to those unfortunate individuals. Thus the mischief would stop with its originator; and even some efforts might be made to extinguish it there, where now it only gets additional exasperation. With regard to those whose bad temper is only excitable on particular points, it might be possible for their connexions and dependents, by studying to give no cause of offence on those points, to prevent in a great measure explosions of anger and exhibitions of wrath, which are both disagreeable at the time to others, and afterwards almost certain to be deeply regretted by themselves."

At an early period of our own labours, we published an article under the title of "Ill Temper, Ill Humour, and Ill Nature," analysing and distinguishing these affections phrenologically. (Vol. iv., p. 121.) A perusal of that paper would carry the reader's mind yet deeper into the subject of these tortuosities of human nature.

The "Educability of Animals," is an interesting paper, although less a speculation than a detail of curious instances of animal accomplishments, which were called forth by long and patient training;—of dogs talking and playing at chess, pigs spelling words, and, still more amusing, pointing at game better than the best trained spaniels. Setting-dogs transmit their acquirements to their young. Mr Combe long ago noticed this transmission as a natural law of the brain, and the foundation of a belief that the organs of thought and feeling may be improved in successive generations. Of this essay we need not offer extracts. As it is vain to notice each one of so numerous a succession of essays, we must draw our remarks to a close, by a brief notice of the essay on Approbation. This is a well-written paper, and so phrenological, that, as an exposition of the nature and legitimate use of the affective faculty called the Love of Approbation, it might have occupied, as it stands, a place in our own Journal. It is phrenological doctrine that the desire of the approbation of our fellow-men is, as a sentiment, a part of the human constitution, quite as much as the desire of food; but like the desire of food, it is a feeling entirely selfish, and, therefore, of inferior rank to the higher sentiments of the mind. The desire of a good name, as a check upon follies,



vices, and crimes, is not only allowable but indispensable. The absence of this feeling is shamelessness, the very worst accompaniment of the vicious character. A consciousness that we stand well in society, or have deserved well of our friends or country, is all legitimate ; while a too strong desire of the positive expression of approbation, in praise and glorification, is beyond the line of moderate use, and verging on the abuse of the faculty called vanity. Our essayist describes, with great felicity, the morbid, fidgetty manifestation of the feeling in those who live and move and have their being in the estimate of the world ; who think that others have nothing to do but to observe and talk of *them*, and who are blessed or wretched according as they believe themselves praised or censured. He says truly, what was observed by Horace, that poets usually belong to this irritable class, as do artists, musicians, and, above all, stage-players ; of all these, praise is as much the pay as money, and often the more valued of the two. They are a class which decidedly over-rate their own position among human things ; and have for ages been encouraged to do so by a world that has not yet attained the highest use of the faculties. They but furnish enjoyment to what has been called the recreative group of the faculties, Imitation, Ideality, Tune, &c. ; and to do so, does not require high endowments of the graver intellectual powers and superior moral feelings. Hence they are very apt to be spoiled, and to consider the acclaim of the crowd, who, after all, are only amused, necessary as the air they breathe to their comfortable or tolerable existence.

“ The true rationale of the question seems to be this : With the generality of natures, a moderate use of praise, as an incentive to duty and reward for its performance, appears to be quite proper. There is a vast class of acts and duties which, though good, are not to be accomplished and attended to without laborious exertion and some degree of self-denial. To sustain and carry out one's self in these matters, one's own approving conscience is all very well ; but though a good, it is a solitary and unsocial feeling. Man dearly loves to find that he is of some consequence to man. He likes to take men along with him in his own approbation. He feels in their praise the bond of a common nature press delightfully upon his heart. How, otherwise, should we see persons in independent circumstances “ shun delights and live laborious days,” only, perhaps, that they may produce some literary work which will have its little hour of éclat, or possibly only a paper to be read at a meeting of twenty persons calling themselves a philosophical society ? This cheap means of causing people to do what it is desirable that they should do, surely has its legitimate place in the arrangements of human society, and is capable of being used without necessarily producing harm. Perhaps

their duties, and even to maintain the equable flow. There is a class of such persons, who have the ability to do all that is good, but are liable to become dispirited and then receive an encouraging word from those about them, an occasional compliment is an aliment as it were to their bread. The world would to them be totally cheerless if it would evidently be as fatal to withhold praise altogether as it would be to give it."

The author has omitted an important topic, namely, the use of praise in the education of youth. We have uniformly held that it ought not to be used, but generally is, as the *chief* stimulant to the pupil, and more especially in the way of emulation; the use of it being the implied reproach of B. Besides this, that education as it ought to be, should offer to the youth in its own intrinsic attractions, it is one of its objects to regulate and moderate Self-Esteem, which is in probation as inferior, selfish, and, in abuse, mischievous feelings. It cannot reasonably undo with one hand what it fesses to do with the other. These feelings will not increase. As they are, they are strong enough, and too strong; and society offers too many temptations to abuse, for education to deal with them, except in any other way than that of regulation and repression.

As it is not within our province to allude to the sixth and seventh volumes of Mr Chambers's *Selections from the Traditions of Edinburgh, the Rebellion of 1746, Rhymes of Scotland, and Original Poems*, far be it from us to commend these as most interesting reading, we must leave of the talented and amiable author an expression as we can indite of our individ-

III. *Nature and Revelation Harmonious: A Defence of Scripture Truths assailed in Mr George Combe's work on the Constitution of Man, &c.* By G. J. KENNEDY, Paisley. Published under the sanction of the Scottish Association for Opposing Prevalent Errors. Edinburgh: William Oliphant and Sons. 1846. 32mo, pp. 147.

This is the best of the books that have been written against "The Constitution of Man." In 1845, an association was formed in Edinburgh by "a number of friends of evangelical truth," for "opposing prevalent errors." James Douglas, Esq. of Cavers, is, or was, the chairman, and the Rev. William Thomson, the Secession minister of Slateford, a small village near Edinburgh, is the secretary. The "prevalent errors" which the Society considers itself called upon to oppose, are, "Popery," "Puseyism," "Pantheism," "Anti-Supernaturalism," "Socialism," "Combe's *Constitution of Man*," and the "*Vestiges of the Natural History of Creation*." The secretary, in his official circular, acknowledges, that "there is little in the piety or principle of the mass of the population to which we can confidently look as a barrier to this tide of superstition." This is an ominous avowal, and one which—taken in connection with Dr Chalmers's declaration (see page 239 of this volume), that, "as things stand at present, our creeds and confessions have become effete"—looks more like the proclamation of failure by a society which has been engaged in a vain attempt to maintain "prevalent errors," than the announcement of an association authorised, by the experience of its power over the convictions of men, to take upon itself the gigantic task here presented in outline.

Since the Revolution in 1688, the clergy of Scotland have enjoyed the privilege of governing parish schools, and instructing the people in religion; and if, in the year 1847, they are constrained to acknowledge that their "creeds and catechisms have become effete," and that they have been able to infuse so "little piety or principle into the mass of the population," that they cannot resist Popery and Puseyism, and the various other "isms" before enumerated, they should really look into their own standards and tenets, and see if there be not in them some "vestiges" of error which have been the causes of so great a failure. Strength, solidity, and endurance, are the characteristics of truth; instability, feebleness, and decay, those of error. When, therefore, they acknowledge, that, after so long period of teaching, the latter



characteristics attach to their own tenets, they should be modest in their condemnation of those of other men. It is, perhaps, a consciousness of this fact that has led them to add that they "feel the need of prudence and caution." These, certainly, are becoming principles of action in men who are meditating assaults upon the opinions of their neighbours, while their own positions are exposed to danger. We shall, however, endeavour to shew that they stand in need of even more of these virtues than they have exhibited in the present publication.

At the same time, we have great pleasure in making one acknowledgment in favour of Mr Kennedy's work. It is free from vulgar vituperation and denunciation. It is, moreover, well written, and, in some instances, ingeniously argued; and it is altogether superior to any thing we have seen produced on that side of the question. Unfortunately, we cannot carry our commendations farther. It assumes throughout that the Scotch Calvinistic *interpretations* of the Bible *are the Scriptures*, and that no different interpretations have ever been heard of; or at least none that are deserving even of mention. In *The Constitution of Man*, Mr Combe has quoted the following words of Dr Whately. "If we really are convinced of the truth of Scripture, and consequently of the falsity of any theory (of the earth for instance) which is really at variance with it, we must needs believe that that theory is also at variance with observable phenomena; and we ought not, therefore, to shrink from trying the question by an appeal to these." Mr Kennedy answers—

"With all due deference to this high authority, we maintain that, if Mr Combe's doctrines are really at variance with Scripture, and if we are really convinced of the truth of Scripture, we must conclude that Mr Combe's doctrines are false. The reasoning is so obviously fair, that we have no fear to exhibit it, either to Mr Combe or to the great logician whom he quotes. It stands thus:—

What is really at variance with Scripture cannot be true;

Mr Combe's theory of the world is really at variance with Scripture;

Therefore, Mr Combe's theory of the world cannot be true."

With all deference to Mr Kennedy, the Archbishop of Dublin is in the right. The record of nature is beyond all question Divine; and whatever we read correctly in it is Divine revelation. Hence it follows, to use the Archbishop's words, that "a pretended revelation would be proved not to be a true one, if it were at variance with the laws by which the Maker of the universe governs it." (See page 238 of this volume.) Mr Kennedy, therefore, and his Society, and all other persons who assail expositions of scientific truths, by arguing that



they are at variance with the doctrines of Scripture, mistake the way to accomplish their own ends. Their true duty is to expound the laws of nature themselves, directly from the records of creation, and then to shew that their own interpretations of Scripture are in harmony with them. The title of Mr Kennedy's work would lead us to expect that he had done this; but his object has been only to attack Mr Combe's doctrines.

Dr Chalmers was called upon, in the Bridgewater Treatise assigned to him, to present a view of the moral government of the world by natural laws, if such exists; and had he given a sounder and more practically useful exposition of them than that contained in "*The Constitution of Man*," and afterwards reconciled Calvinism with it, he would not subsequently have been under the necessity of acknowledging that men "can speak, and with a truth the most humiliating, of an inert and unproductive orthodoxy." Calvinism, proved by an appeal to scientific facts to be a correct interpretation of nature, so far as its doctrines touch the beings and interests of this world, would exhibit none of the symptoms of weakness and decay before referred to; and a people instructed in the firm alliance between it and nature, would possess not a "*little*," but *much* "of the piety or principle to which we can confidently look as a barrier to the tide of superstition."

The Society of which we speak will do well to take this hint into consideration. "*The Constitution of Man*" is a body of alleged facts, and deductions from them. Mr Kennedy's work cannot take its place, because it contains no systematic exposition of the scheme of God's works and providence, which it is the aim of Mr Combe's treatise to exhibit. The human mind will not relinquish a positive for a negative, when that positive is acknowledged by Mr Kennedy himself to be "characterized by great ability," "its deleterious principles" being "mixed up with a large body of sound, and valuable, and interesting instruction." In the "*Remarks on National Education*," and in the essay on "*The Relation between Religion and Science*," published in this volume, pages 1 and 193, Mr Combe has presented additional materials for the Society's operations. If they really design to make an impression on the public mind, let them grapple with the questions there proposed. Let them answer these questions in substantive propositions, and prove the answers, viz.:—Is the world governed by natural laws, or is it not? If it is not, are physical and moral events still caused by special supernatural exertions of Divine power? If these have ceased, and no natural laws exist, is not this world necessarily a theatre of anarchy, and,

consequently, of atheism ? If, on the other hand, natural laws do exist, are they not of Divine institution and authority ? And if they possess this character, where is any intelligible and practical exposition of them by "ministers and laymen connected with various denominations holding evangelical opinions" to be found ? If no such expositions of them by those persons are published, is not the neglect of teaching them, true and practical infidelity to God's law written in the book of creation, on the part of these "ministers and laymen ?"

Farther : Are the practical precepts of Christianity regarding human conduct in this life in harmony with the order of God's providence in the natural world, or are they not ? If they are not, and if the special supernatural administration of physical and moral events has ceased, how *can* man conform his conduct to these precepts ? If the precepts and God's order of providence in the natural world are in harmony,—as science proclaims,—why have these "ministers and laymen" failed to discover this fact ? and, if they have discovered it, why have they omitted to teach it ?

These are the questions which the "ministers and laymen" must fairly encounter and satisfactorily answer, before their lost strength will return to them ; and in giving them this advice, we are acting, we hope, as their sincere friends, and certainly as their wellwishers. If they had practised the "prudence and caution" of which they feel the need, they would have considered these questions maturely, before commencing their present crusade ; and perhaps saved themselves from the risk of a public exhibition of their own errors and inconsistencies, instead of demonstrating those of their neighbours.

Chapter I. is entitled, "Mr Combe's hypothesis concerning the progressive development of elements of improvement in the physical and organic departments of the world considered ;" and the same subject is continued through the two subsequent chapters. The point at issue is, whether "the world contains within itself the elements of improvement ?" In the edition of 1835, Mr Combe had added to this sentence these words,—"*which time will evolve and bring to maturity.*" Some persons had supposed these last expressions (unwarrantably, we think, when the context was taken into account) to imply a denial of the government of the world by Divine wisdom and power. In consequence of their misunderstanding, however, in the next edition, that of 1841, the expressions were altered, so as to avoid this source of error, and the words used were, "The world, including both the physical and

moral departments, is, in itself, well and wisely constructed on the principle of a progressive system, and, therefore, capable of improvement." Mr Kennedy founds his argument exclusively on the edition of 1835, and never mentions the existence of any alterations in that of 1841. We have no doubt that this was unintentional on his part; but as the rule among honourable controversialists is to cite the latest, as the most carefully considered edition of a work assailed, we, while acquitting him of intentional injustice, regret the oversight, for his own sake.

Chapter IV. is on the "Harmony between Geology and Scripture;" which we leave in Mr Kennedy's hands, having neither interest nor space to enter into any controversy with him on the subject.

Chapter V. treats of the question, "Does the history of mankind establish Mr Combe's theory regarding progress ve development?" Mr Kennedy's opening sentence admits that "mankind are, on the whole, making advancement in knowledge and civilization." "This advancement, however," he adds, "is not owing to the mere development of inherent elements of improvement in human nature. For this advancement of mankind, we must assign a very different cause. That cause is Divine mercy. Our world, though fallen, is not forsaken. It is marred; but there are agencies working to effect its restoration to order, beauty, and blessedness. Apostate man is the object of redeeming love, and the subject of renewing grace." This is fighting with a shadow. The real question, as we have said, is, Whether the world be now governed through special supernatural interferences of God's power, or according to natural laws? Mr Kennedy has not shewn the former to be the case, and until he do so, we are entitled to hold by the latter hypothesis, as that which is supported by science and daily experience. But if the order of God's providence is now characterized by the regularity of natural laws, "redeeming love" and "renewing grace" cannot be *antagonistic* influences to these laws; and Mr Kennedy would have done better if he had fairly grappled with the merits of the question, and developed a view of the natural laws adapted to these influences, than by harping on the words which Mr Combe had altered six years before the "Defence" was published, and which are no longer to be found in the "prevalent" editions.

Chapter VI. is entitled, "Was Man originally mortal?" Mr Kennedy holds "there may have been death among the lower animals prior to the time when man sinned." Mr Combe added, that if man is now the same being that he was



when created, he must then, as now, have possessed organs of Amativeness, Philoprogenitiveness, Combativeness, Destructiveness, Secretiveness, and Cautiousness, and that these seemed to him to indicate the adaptation of man to a world in which the old were to be removed by death, to make room for the young, and in which there was to be danger and difficulty, rendering the faculties before named useful and necessary. Mr Kennedy maintains that, notwithstanding these faculties, man may have been created sinless and immortal. The arguments by means of which he supports these propositions are,—first, that the old, like Enoch and Elijah, might have been "removed" to another sphere without dying; and, secondly, that Mr Combe has himself shewn that all the faculties have a legitimate sphere of action, and may, therefore, have been adapted to a world without death, danger, and sin. The whole question lies beyond the limits of science, and Mr Combe has not discussed it in "The Constitution of Man." He has only asserted that the human mind and body, as now constituted, are *de facto* adapted to the world in which we find them; that, apparently, that world was not changed in its constitution and arrangements at the time of man's appearance; and that it has not been substantially altered since. Our readers must judge for themselves concerning man's condition prior to his entering upon his present state.

Chapter VII. is on "Man's Fallen Condition." We leave this also to Mr Kennedy, as one belonging to theology.

Chapter VIII. considers "Mr Combe's Exposition and Application of the Natural Laws." In this chapter Mr Kennedy invents difficulties in order to combat them. By way of correcting Mr Combe, he says—

"But it is not true; 1st, That any mode of action of a physical object is otherwise inherent in it, than as it is the will of God that that object should now present that mode of action. Nor is it true; 2d, That it is beyond the power of God to vary when he pleases, either temporarily or permanently, the constitution of physical objects." This is trifling with the subject: Mr Combe has nowhere ascribed the inherent modes of action of any object, either physical or moral, to any cause except the will and power of God; and he has never maintained "that it is *beyond the power of God* to vary, when he pleases, either temporarily or permanently, the constitution" of these objects. The real practical question is, Does it *de facto* appear from what we



see passing around us, that *it does please God, now to vary*, either temporarily or permanently, the constitution and modes of action of physical or moral objects? Mr Combe affirms that according to his reading of the *present* order of nature, *it does not please God* to vary these constitutions and modes of action; and Mr Kennedy, instead of shewing by clear and unequivocal facts, *now observable*, that God *does in our own day* please to vary these, enters into a general disquisition to prove that God *can* vary them, *if he pleases*, and that under the miraculous dispensations of the Old and New Testaments, he *did vary them*. But not one word of this argument applies to the case in hand. We ask Mr Kennedy, Were not the miraculous dispensations confined to the Jews and the Scripture times? Is the world *now* under the same special supernatural administration which is recorded to have characterized it *then*? Does not Mr Kennedy know that during the long reign of ignorance in the dark ages, the Roman Catholic priesthood pretended that that miraculous dispensation still continued, and that they were the appointed instruments for evoking special supernatural acts of Divine administration; and that one of the boasts of Protestantism has been the demonstration that these pretensions were presumptuous and fraudulent? With strange inconsistency, however, some Protestants have retained a portion of that superstition, and have not only taught it, but acted under its influence themselves. (See pages 194, 195, and 196 of the present volume.)

Chapter IX. is on "The Efficacy of Prayer." The question here again at issue is, Whether we have evidence from observation and experience, that *in our day* God pleases to vary the constitution and modes of action which he has bestowed on physical and moral objects, in consequence of being requested to do so by men in prayer. Mr Kennedy quotes numerous instances from the Old Testament where this is recorded to have been done. "Take, for example," says he, "Elijah's prayer for rain. *That* prayer, in itself, could have no effect whatever on the atmosphere." On this point we beg to refer to the passage quoted from Archbishop Whately's address on the famine in Ireland, on pages 201 and 202, which is applicable to the present question; and to assure Mr Kennedy that if he will adduce a sufficient number of well authenticated instances of men in our day bringing rain or sunshine, or removing the potato blight, or staying fever, or accomplishing any similar physical result, by means of prayer, without bringing into operation, by natural means, the natural causes of those results, we shall abandon all be-

lief in the natural laws, and renounce at once all the "prevalent errors" of Mr Combe's "Constitution of Man." But it is in vain to adduce examples of supernatural power wielded or evoked by the personages of the Old and New Testaments, as evidence that the same gifts have descended to the men of our generation. If they have so descended, why do we accuse the Roman Catholic priesthood of fraud and hypocrisy in having pretended to enjoy them? The man who, by prayer, could, in our day, induce God to send rain, or stay a pestilence, by special acts of Divine administration, would really be able to work miracles; and if we do not seriously believe that this can be done, why should we mock God and deceive ourselves by pretending to believe that it can be accomplished?

Chapter X. is on "Changes in Moral and Religious Character." It is not necessary to discuss the topics involved in this chapter, because the question constantly occurs—Are the changes referred to effected through the instrumentality of God's providence operating by means of the natural constitution and modes of action conferred by Him on moral beings? or are they effected by influences lying beyond these, and not acknowledging alliance with them? If such influences exist and contradict the natural order of God's providence, Mr Kennedy is called on to prove this: If he admits that they act in conformity with it, and supplement it, he allows all that Mr Combe has contended for, which is simply this—that until the natural conditions on which an event or result depends are brought into existence, we have no warrant from *our own experience* (whatever may have been the experience of the Jews in scripture times), to expect that that result will be accomplished.

Chapters XI. and XII. are "On Affliction as a means of Moral Discipline," and contain a strange mixture of truth and error. Mr Kennedy here arrives at the discovery that the natural laws are inconsistent. "The very same act," says he, "*is required* by one law, and forbidden by another law—both laws being Divine. We sometimes cannot obey both the organic and the moral laws." He adds, very truly, "Now this view of matters involves gross absurdity." It really does so; but on whose side does the absurdity lie? By the natural laws, of course he means *God's* natural laws. Now, his proposition amounts to this—that God's creation is not systematic and self-consistent; that the natural consequences which God has attached to the actions of moral beings are *not always* adapted to serve as guides to their conduct; but that man may, in certain cases, shew forth a wisdom

superior to that of God, and legitimately disregard them. Mr Kennedy teaches us, that man by following the dictates of his own wisdom, in opposition to that of God, may reach more excellent and beneficial ends than by following submissively in the track of God's providence! This doctrine, be it observed, proceeds from an evangelical Society associated to oppose "prevalent errors." This, although a strong statement of Mr Kennedy's doctrine, is no misrepresentation or perversion of it: for he assumes that the law which he says may be legitimately and beneficially transgressed or disregarded is *God's law*; and the proposition which he is combating is Mr Combe's doctrine that the Divine laws, *in all cases, and without any exception*, are entitled to command the respect and obedience of God's rational creatures. Let us see, however, by what evidence he supports this extraordinary proposition.

He appeals to the case of Grace Darling, "who," says he, "was rendered illustrious by nobly braving the surges of the tempestuous ocean, endangering her own life to rescue others from a watery grave. She scorned to be withheld from her generous exertions by the regard due to the well-known organic law, that a human body submerged beneath the waves, must soon be bereft of life." (P. 127.) This is a mistake. Grace Darling, by using a boat, which, by the physical law, floats on the surface of the water, preserved her own body out of the water; by obeying the physical law, she obeyed also the organic law, and thus saved herself and her fellow-creatures from drowning. Surely the Society's "prudence and caution," as well as their common sense, were asleep when they allowed Mr Kennedy to publish such an example as evidence of the *advantages of disobeying a natural law*.

He adds another instance in which Mr Holgrove rushed on a railway and rescued two poor women from destruction by an advancing train, but was himself struck down by the engine.

The argument founded on this case, has been already answered in the preceding article on "Religion and Science," pages 209 and 210. The argument itself affords an additional evidence of the thorough confusion which reigns in the minds of evangelical men on the subject of the natural laws, and the low estimate which they form of Divine wisdom manifested in the order of nature. It does not admit of doubt that Mr Holgrove suffered from an error in calculating the position in which his own body and the train would stand relatively to each other at the time when he made the effort. He reckoned on accomplishing his object, and on moving off



the rail, before the train should come up ; in other words, he intended to *obey* the natural law, and not to set it at defiance. It is because we give him credit for this intention, and sympathize with his miscalculation (which in his place we all might likewise have made), that we yield to him the tribute of our admiration. If we believed that he *meant* to throw away his own life (which he must have meant, if he *intended* to disobey the physical law under which the advancing train was moving), and that he merely availed himself of the opportunity of the old women being on the rail, to kill himself with *eclat*, our judgment of his act would be one of unequivocal condemnation.

Mr Kennedy speaks of "evading" the natural laws. The thing is impossible. *God* has connected the consequences with the antecedents ; and *man* cannot separate or evade them. If Mr Kennedy had said, that by obeying one law we may shelter ourselves from the injurious effects of another, we could have understood what he meant ; although, even in this case, there would have been an error in the form of expressing the fact. For example, when a man rises in a balloon, he does not triumph over the law of gravitation by setting it at defiance, but by acting in accordance with it. That law causes the heavier gases of the atmosphere to gravitate more forcibly than the light hydrogen gas in the balloon ; and the former, gravitating downwards, lift the balloon up. A physician who, before visiting a case of malignant and infectious fever, takes a good breakfast, whereby he produces in his own organism an internal resisting power calculated to ward off external influences, and who orders the door and windows of the patient's chamber to be opened, and the room to be ventilated, before he enters it, and by these means escapes infection, does not triumph over the organic law by defying it at the call of duty, but finds his safety in obeying it. If he enters that same apartment feeble, fasting, and exhausted, and encounters its concentrated contaminated atmosphere, unmodified by ventilation, the supposed calls of moral duty will not protect him from the consequences. According to the ordinary course of *God's* providence, he will be infected himself, and he may die. We should be glad to know whether the clergymen and lay inspectors of the poor who have recently fallen victims to their duty in fever hospitals, have acted on Mr Kennedy's view of the order of *God's* providence, or on ours. We have a suspicion that they have gone into the fever wards in a state of mental and physical exhaustion, and neglected the means of diminishing by ventilation the noxious influence of the effluvia from the bodies



of the patients. Be this as it may, the natural tendency of Mr Kennedy's doctrine, backed by all the influence of the evangelical Society, is to encourage men, at the supposed call of moral or religious duty, to set the organic laws at defiance; whereas our earnest exhortation to them is to obey them in *all* cases to the very utmost of their ability. We leave it to the reader to judge which party is here propounding "dangerous error and gross absurdity;" and whether a Society which forms such an humble estimate of the self-consistency and instructive character of God's natural providence, and such an exalted view of its own discrimination, is more likely to "oppose" or to propagate "prevalent errors."

Chapter XIV. is "On the Alleged Possibility of Deducing a System of Morality merely from the Natural Laws." We at once concede to Mr Kennedy, that if God's natural laws be, as he argues, so worthless that "we may often, *to a large extent, properly* disregard them," and "evade or disobey them in multiplied instances, *quite unblameably,*" they cannot be the fountain of a "system of morality." If he should ever have his eyes opened to higher views of the Divine Wisdom embodied in the order of nature, perhaps he may differ less from Mr Combe on this subject than he does at present.

Chapter XV. is "On the use of Science as a guide to the Interpretation of Scripture." True science is merely a correct record of the order of God's providence revealed to the human mind in the constitution and modes of action of physical and moral beings; and while Mr Kennedy forms his present humble estimate of its character, he is not in a condition to judge of its use and importance as a guide to the interpretation of Scripture.

To conclude: we are not sorry that this Society has been formed, and that it has proclaimed war against the sacred and inviolable character of God's providence embodied in the order of nature; because such conduct, and such works as Mr Kennedy's, will soon disclose to the public understanding the extraordinary confusion which reigns in the Calvinistic mind on the connection between Religion and Science, and more speedily and effectually than by any other means bring its obstructive influence on popular education and social progress to a close. We say the Calvinistic mind generally, for "The Free Church Magazine" has not hesitated to adopt Mr Kennedy's views, to recommend his work, and, in American phraseology, to *endorse* all his errors.

IV. *La Phrénologie, le Geste, et la Physiognomie, démontrés par 120 Portraits, Sujets et Compositions, gravés sur Acier.* Par HTE. BRUYÈRES, Peintre, Beau-fils du Docteur Spurzheim. Paris: Aubert et Cie. 1847.

*Phrenology, Gesture, and Physiognomy, illustrated by 120 Portraits, &c.* By H. BRUYÈRES, Painter, Step-son of Dr Spurzheim. Paris: Aubert & Co. 1847. Super-royal 8vo, pp. 516.

This work is based on those of Dr Spurzheim, more especially his *Phrenology in Connexion with the Study of Physiognomy*. M. Bruyères is a son, by the first husband, of Dr Spurzheim's wife. He seems to have imbibed an accurate knowledge of Phrenology, and has applied his art as a painter with considerable success, in illustrating what may perhaps be termed the most refined department of Phrenology, namely the attitudes, gesticulations, and facial movements by which the cerebral organs, individually and in combination, express their activity through the medium of the body. The work is beautifully printed, and many of the plates are worthy of the subject, though to others we cannot give the same commendation. It must have been produced at a great expense, both of labour and of money; and we were glad to learn, during a recent visit to Paris, that it has been appreciated by the French public, and that the sale has been extensive, although the price is 30 francs—a large sum in France for a single volume on a disputed science. We regret that the late period at which we received the volume renders it impossible for us to give a detailed review of its contents. We are obliged, therefore, to limit ourselves to a mere enumeration of the subjects of which it treats.

Chapter I. is on the classification of the faculties; Chapter II. on the temperaments; III. on the definition of the faculties; IV. on the relative positions of the organs; V. on the application of Phrenology to the study of individual character; VI. Difficulties attending phrenological observations; VII. Modes of action of the faculties; VIII. On attention, perception, conception, imagination, and memory; IX. On judgment, good sense and penetration; X. On will; XI. Dreams; XII. Habit; XIII. On the combinations of the faculties; XIV. On orators, poets, artists, and composers; XV. Natural language or mimicry,—studies of expression; XVI. On pleasure and happiness; XVII. Materialism; XVIII. Fatalism; XIX. Moral liberty; XX. Natural

morality; XXI. Application of Phrenology to education; XXII. Application of Phrenology to legislation; XXIII. Application of Phrenology to domestic life; XXIV. On the improveability of the human species—utopianism; XXV. On the world as it exists; XXVI. On the utility of Phrenology; Conclusion. There is an appendix, containing biographical notices of Drs Gall and Spurzheim.

The work, as will be seen, embraces the most interesting topics of Phrenology. It evinces an acquaintance with the best works on the subject, but is a popular rather than a scientific treatise; yet its principles throughout are sound, and we consider it well calculated to awaken a taste for Phrenology in the higher circles of society, who shrink from laborious study until they are well certified that they will be rewarded for the irksomeness of serious application.

We cannot avoid making one unfavourable observation. Plate 90 represents Dr Spurzheim surrounded by a group of persons with ill-developed brains. It is intended to pourtray their fierce indignation, contempt, or hatred, against him and his doctrines; in contrast with his profound sorrow for the pitiable condition of the beings around him. The text informs us that the engraving "represents Dr S. with perfect fidelity in regard to stature, attitude, and every external appearance; and that the countenance recalls the general effect of his features (*leur ensemble*), it having been difficult to arrive at a perfect resemblance in the details. As to the form of the head, it is exact; and it presents such a contrast with those of the individuals by whom he is surrounded, that every one must be struck by the vast difference which exists between a high organization and the types, more or less degraded, which we have grouped around him." Now, we recollect Dr Spurzheim's appearance and expression distinctly, and are of opinion that this engraving does not do him justice. The coronal region of his head, particularly in its posterior part, was larger in proportion to the basilar; and the expression of the moral and intellectual faculties in the countenance was far higher than is here represented. In this plate he stands like a convicted and condemned criminal, rather than like a philanthropist, animated by a great truth, and inspired by benevolence and hope.



and contains an ordinance by His Majesty to be the first example in Europe of d to Phrenology. It is entitled, "Subsid vernment to Phrenology," and proceed

LEOPOLD, King of the Belgians, to all present On the report of Our Minister of the Interior, decree as follows:—

Article I. A subsidy chargeable on chapter x: get of the Minister of the Interior, is allowed t title of *encouragement for his researches and Phrenology.*

Article II. Our Minister of the Interior is ch of the present decree.

Given at Brussels the 6th May 1845.

The Minister of the Interior.

We find also a variety of recommen from the Ministers and other public func to the representatives of the Belgian ( and London.

The work contains an extensive collec of almost every writer who has suppor answers to most of the objections whi against it. In the author's anxiety, how the science to universal acceptation, h have occasionally proceeded too far; to materialism, he seems to teach that / *organs.* The title of the section comm is "Spiritualism."

We have been accustomed to consider the following points as generally admitted by scientific phrenologists. *1st*, That we have no knowledge of mind independent of organization. All the mental processes of which we are conscious, and all the mental manifestations which we perceive, take place through the medium of organs. It is, therefore, a mere waste of words to speak of spiritualism as something known to us independently of, and unconnected with, organization. *2dly*, That there are, and, in this state of our knowledge, can be, no scientific grounds for asserting that the mind governs the organs. Would not the effects of material agents, such as wine, opium, carbonic acid gas, &c., equally warrant the opposite assertion that the organs govern the mind? The truth is, that the mind independent of organs is, in the natural history of man, utterly unknown to us. But, *3dly*, the cause of the organs, and of the mental manifestations which we see connected with them, is unknown to us; and we have, therefore, no adequate grounds for pronouncing any decision on its nature. It is as obscure as the cause of gravitation, or of cohesion in the particles of matter. *4thly*, The true phrenologist confines his investigations to the conditions under which the mental manifestations take place in this life, without pretending to know any thing of a spiritualism which acts independently of matter, and which governs it. Indeed, on such a supposition, Phrenology could never become a science. The unknown quality or power called "spirit," might, at any instant, over-rule all the known effects of the material organs. Phrenology does not stand in need of such a doctrine for its support.

In reality, M. Idjiez does not adduce a single fact in favour of his hypothesis. He refers to the increase of organs by mental culture, and to their decay by neglect of it, and similar phenomena. But the very same results ensue from exercise of the legs or the arms: they are improved by exercise, and injured by inaction. No rational physiologist, however, would ascribe these changes to spiritual causes acting independently of organization. The truth is, that M. Idjiez gives the names of "spirit" and "mind" to the functions performed by the brain, to desire, emotion, and intellect; and because the normal exercise of these functions improves the condition of the organs, and, in some cases, enlarges them, he regards this as evidence of the mind holding matter in subjection. But such reasoning is a mere play upon words, sufficient, perhaps, to obviate the prejudices of the ignorant, but incapable of standing a rigid investigation.

We regard this doctrine as much more than a mere spe-

negant enleverent les sexes d'une de ces  
other illustrations of these propositions which  
the reported fact, that furious maniacs, in  
super-normal strength, on being isolated by a  
earth, which supplies the electric fluid, inst  
super-human vigour. An individual, in this  
ment, threw a sergeant of the town, who atte  
him on the bank of a canal, into the water.  
He was next attacked by a corporal and fou  
beat off the four fusileers, and seizing the  
of his legs, ran off with him, trailing him a  
wards. Finally, a crowd of workmen purs  
knocked down every one who came within  
length, however, he reached a side pavement  
phalt, and his strength instantly departed fr  
allowed himself to be seized. Some took ho  
collar, others by the arms, and some by the le  
went on well so long as he continued on the as  
but the instant he left it, his strength return  
off his captors with the greatest ease. The p  
tioned where this incident occurred, nor is the  
on which the narrative rests; but M. Idjiez r  
of a woman in Brussels who was in a simila

The work contains a description of the p  
lower sentiments. It exhibits a new arrange  
new names. The perceptive organs are sho  
Phrenology is not fully treated of. We pr  
author means to continue his exposition in a

We regret that the limits to which we ar  
vent us from entering into further details.



VI. *On Dean Swift's Disease, Death, and Post-mortem Examination, in which the question of his Insanity is considered; together with some Notices of Stella and St Patrick's Hospital.* By WILLIAM R. WILDE, M.R.I.A. Illustrated with Engravings of the Skulls of Swift and Stella. Dublin: Hodges and Smith. 1847.

This interesting contribution towards a farther elucidation of the life of Swift, is reprinted from Nos. VI. and VII. of the *Dublin Quarterly Journal of Medical Science* for May and August 1847. The author's chief purpose is to bring into one view "such of the symptoms of Swift's disease, mental and corporeal, premonitory and well-established, as the records furnished by himself and his biographers are capable of affording us;" and he has "no hesitation in asserting, that the detail of symptoms here given, chiefly in the words of the patient, afford us one of the best described, and certainly the very longest case of cerebral disease which we have ever met with, extending over a period of fifty-five years!" To all appearance (for without repeating his researches it is impossible to speak authoritatively), he has exhausted the whole original materials that are before the public.

Mr Wilde's conclusion is, that, contrary to the statements of Sir Walter Scott and other biographers, "Swift was not, at any period of his life, not even in his last illness, what is usually termed and understood as *mad*." Whether the biographers have exaggerated the facts, or evidence was accessible to some of them which Mr Wilde does not happen to be aware of, is a question into which it is unnecessary to enter. We are content with the facts which Mr Wilde himself has collected; and, upon their authority, we venture to assert that Swift *was insane*, in the correct acceptation of the term. There is ample evidence, not merely of intellectual decay (apparently to a morbid extent), but of a violence of temper truly describable as *moral* insanity, whatever may be "usually understood" on such a subject. The symptoms of his ailment were "vertigo, deafness, sickness of stomach, pain in the head, diminution of muscular power, as shewn by his tottering gait, and numbness or some slight loss of sensation in the upper extremities. That these in turn were symptomatic of some cerebral affection is manifest. . . . As Swift advanced in years, his symptoms became more decidedly cerebral, whilst the attacks became induced by causes which acted more on the mental than the corporeal nature,

such as excitements of various kinds, great mental labour, and strong emotions; to which the peculiarity of his disposition, and the position which he occupied, especially predisposed him." Mr Wilde infers that it was about 1740, when Swift was in his seventy-third year, that "paralysis of, at least, the face," supervened; and "it is more than problematical [probable?] that, for several years previous to this, Swift laboured not only under attacks of temporary congestion of the head, but of chronic meningitis and cerebritis; and from the date of his loss of memory and the supervention of the paralysis we are inclined to think effusion set in. The long-continued and excessive vascular action to which we refer, has left its traces indelibly marked upon the interior of the cranium, as shewn by the engraving; and the serous effusion is, in fact, the only *post-mortem* appearance recorded by his biographers, for we have no record whatever of the condition of the substance of the brain, though it is probable that there may have been some softening of it." This state, he adds, was either preceded by, or attended with (among other symptoms) "impairment of the senses of sight and hearing, great irritability of temper, and excessive restlessness; then loss of memory and inability of speaking," &c. In short, the patient "laboured under a most fearful physical disease, in the very seat of reason, the effects of which were of the most stunning character, and serving in part to explain that moodiness and moroseness of disposition, which bodily infirmity will, undoubtedly, produce;" but, says Mr Wilde, that he was at any time either *mad* or *imbecile*, "as tried and tested by the meaning and definition of these terms, as laid down by the most esteemed authors, we again assert, has not been proved."

It appears to us, that Mr Wilde here gives a plain *description* of insanity in Swift; and if the definitions of "the most esteemed authors" do not comprehend it, these authors must reform their definitions, if they wish to escape the misfortune of becoming *little* "esteemed." How exclusively *verbal* the dispute is, appears from this curious fact, that in the very paragraph from which our last citation is made, Mr Wilde *twice* expresses his "wonder," that, all things considered, "*Swift did not become deranged years previously!*" His mind, in short, was "deranged;" it had "given way"—but he was not "insane!"

Mr Wilde refers to an article on the skull of Swift, which appeared in this Journal, vol. ix., p. 466. He seems to hold, that no previously normal skull ever "alters its form from long-continued insanity or imbecility." Now, three cases

of this very occurrence were adduced in that article; and many more have probably been observed.

But even if we should concede that cerebral disease never occasions such an abnormal condition of the skull as renders it unfit for the purpose of testing Phrenology, another fact remains, which, though prominently put forward in the article referred to, is conveniently passed over in silence by Mr Wilde—namely, that the skull in question is that of an old man of seventy-eight, and therefore *cannot be depended on as evidence of what the brain was in middle life*. Is it perfectly candid on the part of Mr Wilde to refrain from all mention of this topic, at the same time coolly asserting that the “circumstance of Dean Swift’s head exhibiting small intellectual and large animal propensities, has not yet been accounted for by the votaries of Phrenology?” The truth is, that, as formerly pointed out, there actually is a “coincidence between the development of many of the organs of the propensities and sentiments, and the Dean’s habitual manifestations during life.” And even with respect to the forehead, we are disposed to think that, as the intellectual displays of Swift were much more in the department of the knowing than of the reflecting faculties, this part of the skull may have all along presented, in consequence of the superior development of the organs of the former faculties, a considerably sloping appearance, though not to the same extent as when old age and disease had done their work on the brain. The actual appearances are much exaggerated by Mr Hamilton, whose description of the skull is quoted by Mr Wilde. It is altogether erroneous to speak of the forehead as “extremely low,” and to represent “those parts which the phrenologists have marked out as the organs of Wit, Causality, and Comparison,” as “scarcely developed at all.” True it is, no doubt, that, according to a newspaper report of a meeting of the Dublin Phrenological Society, which we copied into our ninth volume, p. 558, “the depression on the anterior part of the head” was described by one of the speakers as such that “the man must have been apparently an idiot:” but we protested at the time, in a note, against this expression, as “considerably stronger than is warranted by the cast of the skull;” and any one who chooses to examine the cast, or the engraving of it in Mr Wilde’s essay, may judge how the fact really stands.



## III. INTELLIGENCE, &amp;c.

*The Phrenological Society's Lawsuit against Dr Verity.*—The following article, extracted from *The Economist* of the 11th September 1847, exhibits the present condition of this tedious and singular affair. The article is entitled "France and England—International Law—Insecurity of Testamentary Property in France."

"In our publication of the 28th of August, we copied from the *Edinburgh Weekly Register* a paragraph giving a short account of a decision of the Cour de Cassation, in Paris, in a question between the Phrenological Society of Edinburgh and Dr Verity, executor of Dr Robertson. We are informed that the report of the *Weekly Register* is inaccurate and incomplete; and as the points at issue between the Phrenological Society and Dr Verity involve questions of international law, affecting the property of all British subjects dying in France, we have obtained the following details of the facts, and of the decision, from a source on which we can rely; and we recommend the subject to the notice of the British press generally, for the information of all who may have property situated in the French dominions.

"Dr Robertson, a native of Scotland, resided upwards of twenty-five years in Paris, where he practised his profession, and left a fortune invested in French securities. He had never obtained letters of "authorisation" to fix his domicile in France, and was, therefore, in the eye of the law, a foreigner at the time of his death. He executed a testament, in terms of the French law, in which he nominated Dr Verity, an Englishman, residing in Paris, his sole executor. He died in Paris in September 1840, and Dr Verity entered on the execution of the testament. It bestowed certain legacies on individuals named in it, and constituted the Phrenological Society of Edinburgh the residuary legatee, to whom Dr Verity was instructed to pay over the free residue of the funds after paying all the special legacies and expenses.

"Dr Verity uplifted about 400,000 francs, or L.16,000 sterling, of executry funds, and in due season the Society called on him to render an account of his administration, and to pay the residue to them; which, according to their information, should have amounted to about L.15,000 sterling. The executor met this demand with a denial of the existence of the Society, and disputed its right to take up the residue under the will.

"The Society took the advice of eminent lawyers in Edinburgh, London, and Paris, and were assured that their title to the legacy was unobjectionable; and they, in consequence, commenced a suit in the proper French court in Paris, to compel the executor to account for the funds, and to pay over the residue to them. Dr Verity met their demand by denying their existence as a Society, and their right to receive the legacy, and by denying also the right of the French courts to judge in the matter. The French court "Le Tribunal de la Seine" sustained the objection to their own jurisdiction, and refused to entertain the cause at all, as being one between foreigners, and concerning the executry estate of a foreigner.

"The Society entered an appeal to the "Cour Royale de Paris," and prayed that court to reverse the decision, and, in the mean time, to order

Dr Verity to consign, in the hands of an officer of court, the amount of the residue of the estate. On the 9th of August 1842, the "Cour Royale" pronounced a decree, finding that, as both parties are foreigners, the French tribunals cannot judge of any questions between them; but they ordered the executor to consign the residue of the succession for safe custody.

"Dr Verity declined to comply with the order to consign, and the Society applied to the court for the means of compulsion. On the 4th December 1843, the court ordained the executor, within three days, to consign the sum of 30,000 francs, to account of the residue (the exact amount of which Dr Verity did not disclose), with 50 francs per day of penalty, in case of non-compliance.

"The executor entered an appeal against this judgment to the Court of Cassation of Paris; and on the 18th of August 1847, that tribunal confirmed the order, dated 8th August 1842, on Dr Verity, commanding him to consign the residue of the estate for safe custody,\* but they reversed the decree of 4th December 1843, appointing him to consign the specific sum of 30,000 francs to account, under the penalty of 50 francs per day in case of delay; on the ground that Dr Verity being a foreigner, the tribunals of France are incompetent to pronounce a sentence of personal condemnation against him, and that the order to consign, with a penalty attached to it, amounted to such a condemnation. They remitted the case, however, with this finding, to the "Cour Royale de Rouen," to do further in the matter as to them may seem proper.

"The explanation given of the remit to the "Cour Royale de Rouen," is, that that court and the "Cour Royale de Paris" are equal in authority, and that, by the French practice, the court of appeal, when it alters a judgment of an inferior tribunal, does not remit the case to it to correct its own errors, but sends it to another court of equal authority, which is supposed to be more free from bias or tendency to err a second time. Be this, however, as it may, the result of these decisions is practically the following:—

"That when a British subject, having property in France, executes a testament, perfect in all the forms of French law, and names a British subject resident in France his executor, and directs him to pay legacies, and account for the residue to a British subject, the French tribunals, although they will recognise the validity of the testament, give him letters of administration to uplift the funds and put them into his own pocket, deny the British legatees all title to sue him for payment, and call him to account. They consider themselves competent to order him to consign the executory fund for safe custody, and will receive it if he chooses to comply with their order; but they consider themselves to have no power to compel him even to consign.

"The importance of these decisions to British subjects who are resident

\* [This is not the precise shape in which the matter stands, though the fact is substantially as here represented. The order of 8th August 1842, not having been appealed against, never was before the Court of Cassation at all; but it is as final and imperative as if that court had confirmed it on appeal.

It may be added, that Dr Verity's allegation of the Phrenological Society's having ceased to exist, has been refuted by the most satisfactory and conclusive evidence.—ED. P. J.]

in and have property in France, cannot be over-estimated. We are informed that Dr Verity is Physician to the British Embassy in Paris, and that the Phrenological Society has laid a statement of the case before Lord Palmerston. We shall be anxious to learn the result of their appeal to the British Government. According to our information, the law of France rests on the Code Napoleon, which was framed at a time when all Europe was combined against France, and was intended to deny to foreigners of every nation, residents in that country, the aid of the French courts to adjust their claims against each other; and it remains unaltered to the present day. The Americans, Germans, Russians, and Italians, are all, equally with the British, denied the benefit of the French tribunals, in such cases as the present. This is the more intolerable in the case of British subjects, because the courts, both of England and Scotland, exercise jurisdiction over foreigners who have acquired a domicile within their territories, and open their halls equally to foreigners to sue each other and to natives.

"In this narrative we have intentionally abstained from entering into any of the minor details of the case. Dr Verity, for example, alleged, in his pleadings before the French courts, that Dr Robertson had left sisters living in Scotland, and that, on the advice of the Lord Advocate of Scotland, he had paid the residue of the estate to them, and obtained their discharge. The Phrenological Society denied that Dr Verity had the right, on the opinion of any legal adviser, however eminent, obtained not in an arbitration but in private consultation, to set aside the testament under which he was appointed to act; and they, moreover, denied the fact of his having paid the residue to the sisters, and called on him to produce the discharge, which he never did. They therefore affirmed that the residue had not been accounted for, or paid to any party whatever, but was and is still in his own possession. Into none of these questions, however, did the French courts enter. They rested solely on their own incompetency to judge of the rights of foreigners in any form whatever; and it is in consequence of this abstract result that the case acquires its great public importance. As Dr Verity is domiciled in France, and has no known property in Britain, the British courts cannot call him effectively to account, and hence there appears to be no remedy in law applicable to the case."

*Sheffield Phrenological Society.*—The following is extracted from a Report of the Council of this active and flourishing society, read before the members at their Fifth Annual Meeting, held in the Museum, Bank Buildings, April 1, and adjourned to April 9, 1847;—Samuel Eadon, M.A., Vice-President, in the chair:—The Council of this Society have now the pleasure of laying before its Members, not the gradual progression, as heretofore, but the rapid advancement of the interests of Phrenology, made during the Fifth Session, not only with reference to the increase of Members, but also in the greater interest taken in the subject generally, as evidenced by the numerous attendance at many of the Meetings.

One of the most desirable objects sought for without success by former Councils, has, this Session, been obtained; namely, a suitable Room for the depositing of Busts, Books, &c., and for the delivery of Lectures.



For the purpose of throwing more energy into the Society, your Council deemed it expedient that Weekly Meetings should be held, when private Lectures or Papers might be read to the Members, open to discussion. The Society has in consequence had nearly double the number of Meetings enjoyed by former Sessions, as the following list will shew. It must be determined by future Councils whether these weekly meetings be continued.—Oct. 16. Introductory public Lecture on Education, by W. B. Hodgson, Esq., LL.D., of Liverpool. Oct. 31. Private Lecture on the Relative Importance of Poetry, Music, Painting, and Sculpture, by Mr S. Eadon. Oct. 28. Private Lecture on Capital Punishment, by Mr J. Yeomans, jun., solicitor. Nov. 4. Private Lecture on the Connection between Phrenology and the Philosophy of the Human Mind, by Mr S. Eadon. Nov. 11. Report of the Case of John Pallett, who murdered Mr James Mumford, Dec. 8, 1823, taken from the *Phrenological Journal*, vol. i., with remarks thereon by Mr S. Eadon. Nov. 18. Private Lecture on the Connection of the Mind with the Body, through the Medium of the Nervous System, and on certain Combinations of Phrenological Organs, by Mr S. Eadon. Nov. 25. Private Lecture on the Advantages of the Study of Phrenology, by Mr Robert Roper, jun., surgeon. Dec. 2. Private Lecture on the Condition of Adam in Paradise, by Mr Henry Bach. Dec. 9. Private Lecture on the origin of Oratorios, by Mr John Rhodes. Dec. 16. Private Lecture on Common Sense, by Mr S. Eadon. Also, a communication from Mr E. T. Craig. Jan. 20, 27, Feb. 3, and 10, 1847. Course of Four Public Lectures on the Mutual Bearing and Tendencies of Phrenology, Mental Science, and Christianity; shewing that Phrenology is the only system of Mental Physics ever propounded to the world that fully harmonizes with the Religion of the Bible, by Mr S. Eadon. Feb. 17. Private Lecture on the comparison of the characters of Danton and Robespierre, Phrenologically considered, by Mr Derby. Feb. 24. Private Lecture on Self-Knowledge, by Mr F. Scott. March 3 and 17. Two private Lectures, consisting of some Illustrations of the Use and Abuse of Phrenology, by Mr J. Harmar Smith, surgeon. March 10. Communication from Mr W. C. Corsan, of New York, on Capital Punishments. March 24. The concluding public Lecture, on the Philosophy of Taste, with Strictures on the writings of Jeffrey, Payne, Knight, Alison, and Brown, in reference thereto, by Mr S. Eadon.

Without desiring to be personal, the Council cannot but express how much they are indebted to Mr S. Eadon for his numerous and highly interesting lectures, and trust that other gentlemen will follow his example in the succeeding sessions. With a view to encourage members of this Society to deliver lectures, (many of whom are well qualified,) the following list of subjects is added for their choice:—Advantages of Phrenology—Objections to Phrenology—Education, enlightened by Phrenology—Marriage Phrenologically considered—The Temperaments—Biography illustrated and proved by the science of Phrenology—The Study of the Organic Laws—The Moral Laws—The Physical Laws—Practical Phrenology—Anatomy of the Brain—Has Anatomy unfolded the Functions of the Brain?—The Harmony betwixt Phrenology and Christianity—What is Materialism? and has Phrenology any connexion with it?—What is Fatalism? and does Phrenology lead to it?—Is man accountable

for his belief?—The Theory of the Memories—What is the duty of Society with regard to Criminals?—On the nature of the Sublime and Beautiful—On the Laws of Association—The best mode of cultivating a Taste for the Fine Arts—The Nature of Evidence—On Reasoning, and on the Baconian Method of Induction—The Relation between Mesmerism and Phrenology.

The number of Members transferred from the Council of 1845-46 to the present, was *eighty-five*, thirteen of whom withdrew themselves from the Society, leaving a nett number of *seventy-two*. The Council have, however, great pleasure in stating, that the present number is 127, *fifty-five* having been added during the present session—a number far exceeding that of any former period in the Society's history; and your Council doubt not that the number may be further increased, if individual members will take an interest and exert themselves.

Another improvement made during the past session, is the publication of a Descriptive Catalogue of Busts, Masks, and Skulls, to the Museum, in which remarkable developments and peculiarities of formation are pointed out, with historical details of the most extraordinary crania. This has been arranged for the use of the members, by Mr S. Eadon, Vice-President.

With all these improvements and additions, it is evident your Council have had a large amount of expense to meet, yet they are able to say that the financial state of the Society is favourable, considering the heavy outlay, and that the balance due to the treasurer will be easily met in the ensuing session.

The following gentlemen were elected as Officers during the ensuing Session:—Honorary President, George Combe, Esq.; President, Corden Thompson, Esq., M.D.; Vice-President, Mr Robert Roper, jun.; Secretary, Mr Henry Bach; Treasurer, Mr Roger Broadhead; Curator, Mr R. C. Smith; Council, Messrs Robert Roper, sen., John Moss, Charles Milner, Richard Kitchen, George Schofield, William Rhodes, James Sewell, William Horridge, Henry Pearce, Thomas Eyre, George Barnard, and John Yeomans, jun.

*Aberdeen.*—*Presentation to Mr Straton.*—The friends and supporters of Phrenology in this city met on the evening of Tuesday last, in the Museum of the Aberdeen Phrenological Society, for the purpose of bestowing upon Mr James Straton a substantial mark of their esteem, for the able manner in which, for years past, he has conducted the studies of the Practical Class in connection with the Society, and of their high approbation of his literary efforts in the cause of the science. The President, after alluding to Mr Straton's services to the Society, during the whole period of its existence, and the important character of his late investigations, and their bearing upon the future progress of Phrenology, presented him with an elegant copy of Burns's Life and Works, and a purse of sovereigns. Mr Straton made a suitable reply, and the meeting separated, much gratified with the opportunity which had been afforded them, individually and collectively, of acknowledging the generous and praiseworthy labours of the oldest and most indefatigable phrenologist in Aberdeen.  
*Aberdeen, August 13, 1847.*

*Phrenological Quackery in London.*—To the Editor.—SIR,—The following delectable piece of quackery which I had the fortune to meet with a few weeks since, may not be uninteresting to your readers.

We have here, in London, a person named *Mrs Hamilton*, who lectures and practises as a phrenologist. She professes to be in possession of a discovery which is calculated to rectify all defects in the cerebral organisation, as the sequel will shew.

Passing by her rooms the other week, I saw a bill announcing a lecture on Phrenology, with practical demonstrations at the conclusion. I entered, heard the close of her discourse, and witnessed the examination of several persons' heads. I then presented my own cranium for her inspection: she made some "hits," coupled with some gross blunders. The point, however, on which she dwelt most, was "my *decided suicidal* tendency, arising (as she said) from an excessive Cautiousness and a deficient Hope." She then told both myself and the persons present, that she had in her possession a prescription which would speedily cure my "disposition to self-murder." Immediately a small phial was produced, containing a transparent mixture, and a portion thereof applied to my organ of Hope in a twinkling. She rubbed it on the head with considerable rapidity and violence, to the no small amusement of the audience, who testified their gratification by the most unequivocal signs. She then asked me if I felt a burning sensation on the part; this I could not deny, for the heat was most intense. The audience were told that this was a proof the mixture had taken effect. The lecturer now treated us to the following explanation of the *modus operandi* of the lotion (for something of this sort it appeared to be). She said that the heating sensation was an evidence that the preparation was penetrating the bones of the skull, passing through the membranes beneath, and coming into direct contact with the convolutions of the brain in the regions of Hope and Caution, the former of which it would greatly improve, and the latter decrease in power; and, further, the blood would be drawn from the extremities of the body into the organ of Hope, thereby increasing its vigour. How it was to act upon Caution was not explained, and in the general amusement I forgot to inquire. However, the general result was to be the reduction of my "suicidal propensity." Mrs H. then stated, that the mixture was equally effective with *all weak or poorly developed organs*, but in some extreme cases it would be requisite to use a daily application, for which purpose bottles of the preparation could be obtained. A person here enquired "what the stuff was made of," and was told that the principal ingredient was a *secret*, but it was a preparation of metals and acids.

The whole operation being by this time completed, Mrs H. told me that I should not be annoyed on the morrow with gloominess, or thoughts of self-destruction; and I escaped from her hands amidst a general burst of laughter, which I could not help joining in with.

I shortly got into conversation with some of the persons present, two of whom, I soon learned, had been using the lotion, and that for a defect similar to the one Mrs H. had found out in my own head. These two persons were ladies apparently single (that is, matrimonially speaking), and about forty years of age. They informed me that they found considerable benefit from the lotion when applied by Mrs H. to their heads, but when they used it themselves they experienced no relief. This *fact* they communicated to Mrs H., who told them they did not rub enough in,



and if they would come to her on the following day, she would again do it for them. They therefore agreed to come and undergo the rubbing.

A thousand little explanations relative to the cause of nervousness (which, it appears according to Mrs H.'s philosophy, is consequent upon *too much blood in the feet and too little in the head*), and the peculiar power of the "elixir of life" (this is the name which Mrs H. gives to the lotion) in regulating all this, were being given when I left, pondering on the wonderful discovery.

*This is the latest improvement in the art of practically applying phrenological knowledge to the bettering the mental condition of man, that I have met with.*

If we for one moment consider the numberless persons that may be benefited by this discovery, and the consequent advantage resulting to society from its general adoption, we cannot avoid placing the illustrious discoverer on the muster-roll of benefactors of humanity.

No individual need now mourn, even for a day longer, his want of talent or capacity. Brilliant talents and dazzling genius, which the world envies and admires, may now become the personal property of him who will but venture a few shillings for this "*elixir*," not of mere life, but of *mind* also. Our illustrious founder, Gall, has secured for himself a great and enduring name in the annals of philosophy. But even he will be eclipsed by this later genius, who not merely explains to us the secret of mind, but actually places at our disposal the means whereby we can *confer upon ourselves* the talents of which the great German only understood the philosophy.

As respects the application of this discovery to the *moral* improvement of society.—Let an association of benevolent persons be formed to subscribe for a wholesale supply of the lotion, and distribute it with directions for use amongst their badly organised fellow-men and women. I would suggest that a committee be appointed to carry on the work of regeneration with our criminal population. Let the tenants of our jails, penitentiaries, penal settlements, &c. &c., be subjected to a *daily application* on their coronal regions, and, in a very short time, a most gratifying change will become evident.

The diffident, the timid, the indiscreet, the wavering, the spiritless, and the procrastinating, all, all should be provided with this most potent "*elixir*."

But, to be serious, Is it not, Sir, astonishing, is it not lamentable, that in the nineteenth century, and in the British metropolis, such detestable quackery should be preached to the public in the name of science, and that, too, by a person professing to be one of its disciples? Well may we exclaim, "Heaven save us from our friends!" Such friends do our science more injury in the minds of the public, than the severest satires or strongest arguments of its avowed opponents.

Phrenologists ought to openly and publicly expose such empiricism, and put the people on their guard against such impostors.

But, Sir, I must conclude, praying you will give some observations on this subject. I think that, for the credit and dignity of our science, the Journal cannot be too severe upon this matter. I now leave this in your hands, and subscribe myself, yours truly,

PETER JONES.

4 GOLDSMITHS' ROW, GOUGH SQUARE,  
FLEET STREET, LONDON, 9th May 1847.

*Dr W. B. Hodgson.*—"We are glad," says the *Manchester Examiner*, "to announce to our fellow-townsmen the acquisition, at no very distant period, as a resident amongst us, of W. B. Hodgson, Esq., LL.D., Principal of the Liverpool Mechanics' Institution, and head master of its High School. After an eight years' connection with that institution, Dr Hodgson now assumes the Principalship of the Chorlton High School, along with our highly respected townsman, the Rev. H. L. Jones, M.A., who intends ere long to retire from the duties of tuition, leaving to Dr Hodgson the proprietorship and sole management of the school. Dr Hodgson's great experience in education, as well as the advanced views which he is known to entertain with regard to both its philosophy and its practice; his eminent scholarship, and the extensive range of his literary acquirements, render the prospect of his settlement in Manchester a subject for general congratulation. We have reason to know that Dr Hodgson's services to the institution over which he has so long and efficiently presided, have received the warmest approbation and appreciation from its directors and the public; and that in Liverpool, where he has gained the esteem of all parties by his intelligence and public spirit, his removal to a new sphere of duties is regarded with very great regret." The following resolution has been passed unanimously by the Committee of the Liverpool Mechanics' Institution:—"That this Committee accept with great regret the resignation by Dr Hodgson of his office as Principal of this Institution, and in doing so record their high sense of the benefit which the Institution has derived from his able and zealous services during the period of eight years in which he has been connected with it, and express their best wishes for his future happiness and prosperity in life." Among the various honours which have been paid to Dr Hodgson on the occasion of his departure from Liverpool, was a soiree given on the 25th of September, at which were present all the teachers and officers of the Mechanics' Institution, amounting to about sixty (including the lady superintendent and teachers of the Girls' School in connection with it), and also a number of Dr Hodgson's personal friends. Mr England, now head master of the High School, read an address by the teachers and officers, expressive of the high respect and esteem in which he is held by them, and requesting his acceptance of a pair of globes. "While for our own sakes," they say, "and the sake of this Institution, we regret your resignation, we rejoice that the change which you are now about to make will introduce you to a new, and, we trust, a wider sphere of activity and usefulness, and prove advantageous in many other respects. Though the place of their action may be changed, yet we are confident that your talents will continue to be exercised, with the same energy and discretion as heretofore, in advancing the great cause of human improvement." Dr Hodgson entered on his new duties on the 6th of October, and we heartily join with his other friends and admirers in the expectation that he will perform them with his usual great ability and success.

*Family of Dr Spurzheim.*—On 21st July 1847, I visited Trèves, and as Dr Spurzheim was born in the neighbourhood, I made enquiries after the family to which he belonged. I asked the "castellan" or custodian of the public library if he knew anything of the family; but he had never

heard of Gall or Spurzheim, of *Schädel lehre*, or Phrenology ! He had, however, been in Trèves only two years, and he offered to ask "the professor," who, as I understood him, was the chief librarian, if he had ever heard of such persons ; and promised to call at the hotel, which was quite near to the library, and inform me of the result. At 8 p.m. he called, and mentioned that he had now seen Professor Steinberger ; that the professor knew Dr Spurzheim's family, and that last year a sister of Dr S. had lived in the suburb of Trèves, immediately beyond the *Porta nigra*. He kindly accompanied me in search of her residence. He enquired in vain in the street indicated by the professor ; when an intelligent person, with whom we held consultation, suggested that we should go to the burgo-master of the district, who had a roll of all the inhabitants. We did so ; but he had never heard of the name. Having been told, however, that Dr Spurzheim was a native of Longuich, near Trèves, that he had had a great reputation in England, and that I desired to learn whether any members of the family were still alive, and who they were, he proposed, unasked, to apply to-morrow to the police magistrate, whose authority embraced the whole city, and to inform the castellan,—who, with equal kindness, offered to write to me in Edinburgh the result of their investigations. I offered to give them pecuniary compensation for their trouble, but they both declined to accept of any consideration, being obviously gratified to assist in the enquiries. The castellan stated, that he had consulted the "*Conversations-Lexicon*," which contains an account of every man of every country in the least distinguished, but that Spurzheim's name is not to be found in it !

At half-past 11 p.m. I was roused from sleep by a great knocking at my bedroom door. A person whom I did not know presented to me a paper, which he said was written by an individual who knew all about the Spurzheim family, and who had heard of my enquiries. As I had mentioned that I was to leave Trèves the next morning at 5 o'clock, he had come at this late hour, lest I should not otherwise receive the information ; and before I had time to look at the writing he had departed. I send you a translation of it ; and I have given this history of its origin, that no more importance may be attached to it than it deserves. I have no means here of consulting Mr Nahum Capen's *Life of Dr Spurzheim* ; but you will see from it how far this memorandum contains anything new, and how far it agrees with previous reports. The translation is as follows :—

"The family of Spurzheim were, before the time of the French revolution, viz., before the year 1794, farmers upon the estate called the *Maximiner Gut*" (or the estate belonging to the Abbey of Maximinian), "at Longuich, near Schweig, on the Moselle. Old Spurzheim died in the farm. From that time, his widow lived in this parish. Afterwards, she left it, and died in 1802, in the house of her brother, who was a clergyman at Selters, near Limburg, in the Grand Duchy of Hessen.

"A son of the name of Francis died in this parish about the year 1797.

"A son called Caspar was a doctor in England.

"A son of the name of John Joseph is said to have died in Vienna.

"A daughter called Theresia was married in Schweig, who has left a numerous family, still in existence.

"Another son was a saddler and lived in Vienna, whose name I do not know.



"This is all that is known of the said family.

"The burgomaster of the parish," (signed) "PROBST."

He does not mention of *which* parish he is burgomaster, but it must be in or near Trèves.

As my stay was short, I had no opportunity of prosecuting these enquiries farther; but even these slender memorials may perhaps facilitate the researches of some future biographer of this distinguished man.

— GEO. COMBE.

COBLENZ, July 23, 1847.

*Skull of Sir Thomas More.*—A writer in *The Gentleman's Magazine* for May 1837 (vol. vii. p. 494), signing "V. S. D.," and dating his communication from "St Dunstan's, Canterbury," states, that Sir Thomas More's head "was obtained (after its exposure on London Bridge) by his beloved daughter Margaret, and brought to her residence in St Dunstan's, Canterbury, and deposited, by her request, in the same vault with her after her decease. Your readers are aware that she was married to one of the Roper family, who had a mansion in this parish, the gate of which—a curious piece of brick-work—is still standing, and is the entrance to a brewery; but no vestige of the house is left. In the chancel of the church is a vault belonging to that family, which, in newly paving of the chancel, in the summer of 1835, was accidentally opened; and, wishing to ascertain whether Sir T. More's skull was really there, I went down into the vault, and found it still remaining in the place where it was seen many years ago, in a niche in the wall, in a leaden box, something of the shape of a bee-hive, open in the front and with an iron grating before it. In this vault were five coffins, some of them belonging to the Henshaw family, one much decayed, no inscription to be traced on it. The wall in the vault, which is on the south side, and in which the skull was found, seems to have been built much later than the time of Sir T. More's decapitation, and appears to be a separation between the Roper chancel and the part under the Communion Table. In the same chancel are two venerable altar tombs, of Bethersden marble, one of them partly within an arch in the wall, which was probably that of the founder of the chancel, and from both of which, brasses have evidently been removed. \* \* \* Opposite to these tombs is a beautiful monument, erected by a grandson of Sir T. More, sacred (as he calls it) '*PIETATI ET PARENTIBUS*;' it has been lately cleansed from the dust and cobwebs of ages, and stands forth now in all its former chaste and simple beauty." A wood-engraving of the grated niche is given, but only the facial bones are visible, the rest of the skull being hidden by the box. The editor adds the following remarks:—"In illustration of the interesting disclosure made by this correspondent, we have made the following extracts from the several authors who have noticed the fate of the Head of Sir Thomas More. The first is from *Cresacre More's Life* of his illustrious ancestor (p. 289, Mr Hunter's edit.):—"His head having remained about a month upon London Bridge, and being to be cast in the Thames, because room should be made for divers others, who in plentiful sort suffered martyrdom for the same supremacy shortly after, it was bought 'his daughter Margaret, lest (as she stoutly affirmed before the Court being called before them after for the same matter) it should be food

fishes; *which she buried where she thought fittest*; it was very well to be known, as well by the lively favour of him [*i. e.* the expression of his countenance], which was not all this while in any thing almost diminished; as also by reason of one tooth, which he wanted whilst he lived; herein it was to be admired, that the hairs of his beard being almost grey before his martyrdom, they seemed now as it were reddish or yellow.' The next is from Lewis's Preface to Roper's Life of Sir Thomas More (Singer's ed. p. xxi.):—' With this excellent woman Mr Roper lived about sixteen years, she dying 1544, nine years after her father, when she was buried in the family burying-place at St Dunstan's, with her father's head in her arms, as she had desired.' But still more precise, and doubtless more accurate, is the account given by Anthony à Wood in his *Athenæ Oxonienses* (vol. i. p. 86, Bliss's edit.):—' As for his head, it was set upon a pole, on London Bridge, where abiding about fourteen days, was then privily bought by the said Margaret, and by her for a time carefully preserv'd in a leaden box, but afterwards with great devotion 'twas put into a vault (*the burying-place of the Ropers*) under a chapel joyning to St Dunstan's church in Canterbury, where it doth yet remain, standing in the said box on the coffin of Margaret his daughter buried there.' And lastly, as confirming the chain of proof as to the identity of the skull lately seen, the following note in the same place is very satisfactory:—' Dr [then Mr] Rawlinson informed Hearne, that when the vault was opened in 1715, to enter into one of the Ropers family, the box was seen enclosed in an iron grate.' We hope that a cast of this skull may be obtained.

*Importance of Cheerfulness in Childhood.*—I may be permitted for a moment to urge the high importance of preserving in children a cheerful and happy state of temper, by indulging them in the various pleasures and diversions suited to their years. Those who are themselves, either from age or temperament, grave and sober, will not unfrequently attempt to cultivate a similar disposition in children. Such, however, is in manifest violation of the laws of the youthful constitution. Each period of life has its distinctive character and enjoyments, and gravity and sedateness, which fond parents commonly call manliness, appear to me quite as inconsistent and unbecoming in the character of childhood, as puerile levity in that of age.

The young, if unwisely restrained in their appropriate amusements, or too much confined to the society of what are termed *serious* people, may experience, in consequence, such a dejection of spirits as to occasion a sensible injury to their health. And it should furthermore be considered that the sports and gaieties of happy childhood call forth those various muscular actions, as laughing, shouting, running, jumping, &c., which are, in early life, so absolutely essential to the healthful development of the different bodily organs.

Again, children, when exposed to neglect and unkind treatment,—for to such they are far more sensible than we are prone to suspect,—will not unusually grow sad and spiritless, their stomach, bowels, and nervous system becoming enfeebled and deranged; and various other painful infirmities, and even premature decay, may sometimes owe their origin to such unhappy source.—*Sweetser's Mental Hygiene.*

*Education of Idiots in Paris.*—On the 20th of September 1847, at 10 A.M., I went to Bicêtre, the great public Pauper Lunatic Asylum of Paris, where Dr Voisin (who is an enlightened and avowed phrenologist) received me most kindly, and conducted me to his school for the education of idiots.

There were about 100 of them, of ages varying from 10 or 12, to 30 or 40 years. Their heads were of all forms and sizes. There were idiots from pure deficiency in the size of the brain—with small narrow foreheads, small in the coronal region, and some of them small also in the region of the propensities;—idiots from extreme deficiency only in the intellectual organs, with predominant propensities; idiots from epilepsy, with brains well formed but diseased; idiots from hydrocephalus; idiots from structural weakness of brain, members of families in whom insanity is hereditary, and in whom mere weakness of structure begets idiocy, independently of deficiency in form and size; and, lastly, children who are mischievous from great predominance of the organs of the propensities over those of the intellect and moral sentiments, and whose brains are liable to excitement and abnormal activity, without, however, being involved in what can be properly called either insanity or idiocy.

The object is, to waken up the dormant powers, to restrain the over-active, and to bring all into a condition of regulated action, approaching as nearly as possible to the state of reason.

The means followed are, the enforcement of cleanliness and order; the supply of good nourishment, in proper quantities; a great deal of muscular exercise; and unceasing appeals to the five senses, the faculties of observation, and the moral feelings. Kindness, vivacity, and intelligence, characterize their teacher in an eminent degree. Dr Voisin said that it is necessary to knock a hundred times on the deficient faculties, before they will respond; but, if you constantly present to them their natural objects, persevere, and solicit them by kindness, they will open more or less by degrees; and when you have once obtained access, you may convey to them much more information, and train them, by imitation and repetition, into habits of action, much more closely approaching to reason, than you could have anticipated before making the experiment. The first grand object is to *fix the attention*; and this is done by bringing down the wandering and glimmering faculties to deal with *realities*. He has bottles containing a variety of odorous substances, which are presented in succession to the organs of smell, and the idiot is taught to discriminate the differences, and afterwards to name the substances: Figures of various forms are presented to educate the senses of sight and touch. There are music, and marching, and dancing, to teach them to discriminate sounds and intervals of time; military evolutions, gymnastics, and fencing, to educate the faculties of Order, Individuality, and Eventuality, and to invigorate the corporeal functions generally. Moral instruction, reading, and any other kind of knowledge for which the individuals shew a capacity, are added; and, at length, those whose faculties are sufficiently developed are employed in trades. I saw them making shoes, and tables and chairs.

The results are very satisfactory. In an ordinary asylum, these idiots would have been lolling about the wards, with open mouths, vacant wandering eyes, slouching gaits, and countenances destitute of intelligent



cluding some of her extraordinary *sostenuto* notes, with all their inflections from pianissimo to forte crescendo, and again diminished to thread-like pianissimo: but in all these fantastic tricks and displays of genius by the Swedish nightingale, even to the shake, she was so closely and accurately tracked by the somnambulist, that several in the room occasionally could not have told, merely by hearing, that there were two individuals singing—so instantaneously did she catch the notes, and so perfectly did their voices blend and accord. Next, Jenny having been told by Mr Braid that she might be tested in some other language, this charming songstress commenced "*Casta Diva*," in which, the fidelity of the somnambulist's performance, both in words and music, was most perfect, and fully justified all Mr Braid had alleged regarding her powers. Indeed, he said, he had never known this patient fail in such feats. The girl has naturally a good voice, and has had a little musical instruction in some of the "*Music for the Million*" classes, but is quite incapable of doing any such feat in the waking condition, either as regards singing the notes or speaking the words with the accuracy she did when in the somnambulist state. She was also tested by Madlle. Lind in merely imitating language, when she gave most exact imitations; and Mr Schawbe also tried her by some most difficult combinations of sound, which he said he knew no one was capable of imitating correctly without much practice, but the somnambulist imitated them correctly at once, and that whether spoken slowly or quickly. When the girl was aroused she had no recollection of anything which had been done by her, or that she had afforded such a high gratification to all present, by proving the wonderful powers of imitation which are acquired by some patients during a state of artificial somnambulism; she said she merely felt somewhat out of breath as if she had been running.—Mr Braid attributes all this merely to the extraordinary exaltation of the sense of hearing and the muscular sense, at a certain stage of the sleep, together with the abstracted state of the mind, which enables the patients to concentrate their undivided attention on the subject in hand; together with entire confidence in their own powers. By this means, he says, they can appreciate nice shades of difference in sound, which would wholly escape their observation in the ordinary condition, and the vocal organs are correspondingly more under control, owing to the exalted state of the muscular sense; and the concentrated attention and confidence in their own powers with which he endeavours to inspire them, enables them to turn these exalted senses to the best advantage. He says it is no gift of intuition, as they do not understand the meaning of the words they utter; but it is a wonderful example of the extraordinary powers of imitating sounds, at a certain stage of somnambulism. And wonderful enough it most assuredly is, that, by human art, an individual, such as that referred to, should, by such a simple process, and in a few minutes too, be invested with such extraordinary powers as above described, by which she could instantaneously catch the exact sound of both words and music, so as to accompany the others as if she had previously been perfectly familiar with both."—Mr Braid writes us that he can vouch for the foregoing account being "substantially correct, and no exaggerated picture." One or two of those present thought they observed the somnambulist fail in one of Madlle. Lind's highest notes, which was

beyond the compass of her voice : Mr Braid thinks this likely enough, though he did not himself observe it.

*Dr M'Call on the effects of Disease and Pressure of the Brain.*—The principles of Phrenology are strongly inculcated in an "Annual Address delivered before the Medical Society of the State of New York, in the Assembly Chamber of the Capitol, at the city of Albany, Feb. 3, 1847, by John M'Call, M.D., President of the Society," published in the *Transactions of the New York State Medical Society*, vol. vii. We subjoin a short extract :—

"Diseases of the brain, whether functional or organic, together with injuries or lesions of its masses, affecting their delicate structure and healthful actions, disturbing, as they often do, and even suspending or effacing, for a time, every ray of mental thought and feeling—as in the case of Jones, detailed in Sir Astley Cooper's work on Surgery—prove, as I humbly conceive, most conclusively, the use and importance of the brain in mental manifestation. Jones was a sailor, wounded in the head in taking a prize in the Mediterranean, June 1799, and lived, to use the words of Sir Astley, 'a year, unconscious of his existence.' Mr Cline, a distinguished surgeon in London, performed on him the operation of trepanning, a year after the injury. The portion of bone that had been driven in, was raised ; and thus the patient recovered perfectly, in a few days afterwards, the use of his brain, and mental faculties.

"Whilst surgeon in the United States army, during the last war with England, I had an opportunity of witnessing the effects of compression by my hand on the brain of a soldier, whose skull had been extensively fractured, and a portion thereof, as well as brain, cut away on the upper part of the left hemisphere, by an Indian, with his tomahawk. The intellects were scarcely at all impaired. Yet, on compressing the brain with my fingers, loss of consciousness and insensibility supervened. On removing the pressure, perception and understanding of what was being done around him returned, after a short time. Several such cases have been met with, and detailed in medical and surgical works. A patient of mine lived two years without knowing the fact. He had been insane, and the last two years of his life were spent in a state of profound idiocy. This was called a disease purely of the mind, and many so regarded it, as the patient was fat and plethoric at the time of death. But on a careful post-mortem inspection of the brain, in the presence of Drs Brigham and others, it was found extensively diseased. This pathological state accounted most satisfactorily to our minds for the failure of mental manifestations, as stated.

"We have no evidence that the mind is ever affected, or diseased, or crazed, in any case. Our opponents, I fear, are not aware of the dilemma in which they place themselves, when they maintain the notion that the mind is thus diseased. If it be thus subject to affections and ailments, like the body, what evidence have they of its immortality ?

"In this, as in the other notion respecting the immortality of the mind, or soul, depending necessarily on its immateriality, I think great injury has been done in both cases. I would have the whole of man immortal. The doctrine of immortality is to me delightful and consoling. I am one of its firm believers."

*Phrenology in Mexico.*—I need not tell you, that in Mexico there are but few cultivators of Phrenology; yet the number is much greater than it was ten years ago. This accession of strength is owing chiefly to the members of the medical profession. Every year a number of Mexican young men go to Paris to study the healing art; there they hear of, and become convinced of the truth of Phrenology; and on their return to Mexico, they disseminate their opinions amongst the more candid and intelligent of their countrymen. Several Englishmen, residents in Mexico, have, within the last ten years, strongly battled for Phrenology; amongst them, a Mr W. Canning and a Dr Macartney stand conspicuous. What a pity it is that Phrenology is encumbered by the support of so many ignorant and knavish pretenders. One of that class came to Mexico whilst I was there. He was an American, and unable to write a dozen words in correct English. When he left Mexico, he took some books with him, which belonged to a friend of mine. In the United States, Phrenology has made great progress—greater, I fancy, than anywhere else.

W. M. M.

5 PADDINGTON, EDGEHILL, LIVERPOOL,  
21st September 1847.

*Varieties.*—A Phrenological Society, consisting of Hindoos, has lately been established in Calcutta, and in August last included fourteen members, of whom two are schoolmasters, four belong to the medical profession, and the rest are engaged in mercantile pursuits. They have sent a remittance to Edinburgh, to be expended in purchasing a suitable collection of casts, books, &c. We wish them much success, and shall be happy to learn that the study of Phrenology becomes general among the Hindoos.—Mr Solly, in the second edition of his excellent work on *The Human Brain; its Structure, Physiology, and Diseases*, just published, p. 339, thus avows his opinion of Phrenology:—"My reasons for believing that there must be a great deal of truth in Phrenology are fourfold. First, I have received from practical phrenologists, and especially the late worthy Mr Deville, such accurate characters of individuals known to me, but unknown to them, that I cannot believe the accounts I received could be the result of accident and conjecture, which must have been the case if Phrenology is untrue. Secondly, Phrenology alone—as it appears to me—can account for all the varieties of insanity, especially monomania. Thirdly, The facts which have been collected by the late Mr Deville, shewing that the brain will alter its form at any period of life. Fourthly, The existence of longitudinal commissures."—In a late report by Mr Allen, accompanying the Minutes of the Committee of Council on Education, the cheering and elevating influence produced by the cultivation of music in schools is thus mentioned:—"Scarcely any school visited in my district, in which music is taught successfully, fails to rise to considerable eminence in other respects. The schools at Longparish and Forton, where great attention is paid to this art, are excellent specimens of a strong moral influence being exercised thereby. Our forefathers reckoned music among the seven liberal sciences: and I hope that we are making a considerable advance in the right direction, in bringing back into our schools an art which, under proper management, cultivates a certain delicacy of feeling and gentleness, greatly needed by the children of



the poor,—making their tempers plastic, and contributing in various way to harmony and order." With these remarks we cordially agree.—Mr Prescott, in his lately published *History of the Conquest of Peru*, speaks thus of the Inca nobility:—"It was the Inca nobility who constituted the real strength of the Peruvian monarchy. Attached to their prince by ties of consanguinity, they had common sympathies, and, to a considerable extent, common interests with him. Distinguished by a peculiar dress and insignia, as well as by language and blood, from the rest of the community, they were never confounded with the other tribes and nations who were incorporated into the great Peruvian monarchy. After the lapse of centuries, they still retained their individuality as a peculiar people. They were to the conquered races of the country what the Romans were to the barbarous hordes of the Empire, or the Normans to the ancient inhabitants of the British Isles. Clustering around the throne, they formed an invincible phalanx, to shield it alike from secret conspiracy and open insurrection. Though living chiefly in the capital, they were also distributed throughout the country in all its high stations and strong military posts, thus establishing lines of communication with the court which enabled the sovereign to act simultaneously and with effect on the most distant quarters of his empire. They possessed, moreover, an intellectual pre-eminence, which, no less than their station, gave them authority with the people. Indeed, it may be said to have been the principal foundation of their authority. The crania of the Inca race shew a decided superiority over the other races of the land in intellectual power and it cannot be denied that it was the fountain of that peculiar civilization and social polity which raised the Peruvian monarchy above every other state in South America." These nobles acted as provincial governors and judges. The laws were in accordance with the large organ

We are glad to learn that Captain Maconochie's views of criminal treatment (to which we have often referred) have now, at least in great part, been adopted by the Government, and that their experiment in Portland Island is to be committed to Captain Maconochie's own superintendence. This is a step of very great importance, and the announcement of which will be very welcome to many who have long struggled for the reform of our penal system.—Sir G. Simpson, in his "Narrative of a Journey round the World during the years 1841 and 1842," reports some interesting particulars that were told him by an American missionary named Munger, who had been two years on the Columbia along with his family. "This gentleman," says he, "was grievously disappointed with the country—a feeling common, in his opinion, to most of his fellow-citizens. But the ministers of the Gospel, moreover, had a grievance peculiar to themselves; for, instead of finding the savages eager to embrace Christianity, as they had been led to expect, they saw a superstitious, jealous, and bigoted people. They soon ascertained that they could gain converts only by buying them; and they were even reproached by the savages on the ground that, if they were really good men, they would procure guns and blankets for them from the Great Spirit merely by their prayers. In short, the Indians, discovering that the new religion did not render them independent of the traders any more than their old one, regarded the missionaries as nothing better than impostors. Under these discouraging circumstances, Mr Munger was desirous of returning home." This account corresponds with what is recorded of Thomas Adams the Flathead Indian in our eighteenth volume, p. 191.—E. S., writing to us from Malaga on 7th July 1847, proposes that those who recognise the value and importance of Phrenology as a guide in education, should proceed to act according to their convictions, by establishing "one or more free schools, which shall be conducted entirely according to phrenological doctrines. I would further suggest," he adds, "that the more particular object of such schools should be to qualify young men to become efficient teachers, and apostles of a superior educational system. To attain this end, subscriptions from believers in the science are necessary, and I, although merely a young employe of a Manchester mercantile House, shall have pleasure in subscribing annually a couple of guineas towards the support of such school or schools. More wealthy men, who may, like myself, entertain strong opinions on this matter, will doubtless subscribe more largely; and I trust that if committees be formed for the purpose, a sum will shortly be obtained sufficient to put at least one school in full operation. I leave to abler hands the task of chalking out the system to be pursued; merely suggesting that the end desired is, the most complete and harmonious development of all the faculties, intellectual, moral, and bodily, and to shew practically the working of an educational scheme as complete as can be devised. I enclose my address, so that in case the idea is realized, you may put me down as a subscriber for the amount named."—We learn on good authority that 18,000 copies of the *American Phrenological Journal* are issued monthly, by the publishers at New York; and that 200,000 copies of the *American Phrenological Almanac* for 1847 have been disposed of. The publishers (Messrs Fowler and Wells) intended to reprint our own *Journal* regularly from 1st January next, but the suspension of its publication has

of course led to the abandonment of this design.—Mr C. Donovan delivered three lectures on Phrenology at the Greenwich Institution in September, to large audiences, and three at Boxley Heath Institution in October. He is to lecture at the Woolwich Institution in November.—Mr George Combe has in preparation a pamphlet on the question, "What should Secular Education embrace?" It will appear in January next. Mr C. intends from time to time to publish pamphlets on topics of public interest to which Phrenology can be applied. They will be printed uniformly with this journal, and may be obtained from the publishers of his other works. We may add, that an eighth edition of his "Constitution of Man," carefully revised, corrected, and enlarged, has lately appeared. It is a goodly post 8vo volume, more handsome in its appearance, and more agreeable to the eye of the reader, than any of the previous editions. Since 1828, above 80,000 copies of the work have been printed in this country.

*Books Received.*—The American Phrenological Journal, vol. viii., edited by O. S. Fowler, 1846; also, Nos. 1 to 6 of vol. ix.—Preface to "Mesmer and Swedenborg; or, The Relation of the Developments of Mesmerism, and the Doctrines and Disclosures of Swedenborg. By George Bush. New York, 1847.—Annual Report of the Belfast District Asylum for the Insane Poor, 1847.—A Few More Words on the Duality of the Mind, and some of its Corollaries. By A. L. Wigan, M.D. (Printed for private circulation).—Annual Report of the Directors of the Dundee Royal Asylum for Lunatics, 1847.—Physiology and Phrenology, for the Use of Children and Youth in Schools and Families. By Mrs L. Fowler. New York: Fowlers and Wells, 1847. 2 vols. post 8vo.—Fascination, or the Philosophy of Charming. By John B. Newman, M.D.



## ADDRESS

TO THE READERS OF THE PHRENOLOGICAL JOURNAL, AT THE  
CONCLUSION OF THE NEW (OR SECOND) SERIES.

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WHEN the First Series of the Journal was brought to a close in 1837, its conductors drew up a brief statement of the circumstances under which it had been carried on during the preceding fourteen years, and of the reasons by which they were influenced in then transferring its publication from Edinburgh to London. That statement, subscribed by the gentlemen who were then the proprietors (James Simpson, Andrew Combe, and George Combe), was published at the beginning of the first Number of the New Series (vol. xi., No. liv.), and was to the following effect :—

“ Mr William Scott, Mr James Simpson, Dr Poole, Dr Andrew Combe, and Mr George Combe, were the original proprietors of this Journal, and by them its publication was commenced in December 1823,—a time when the force of public prejudice made it almost impossible to obtain a hearing. The enemies of Phrenology confidently prophesied that its first Number would be its last ; yet its conductors have now completed *fifty-three* quarterly numbers, forming *ten thick octavo volumes* ! The first four numbers were edited by Dr Poole, under an engagement with the proprietors, at the close of which he ceased to have any connection with the work. The subsequent numbers, down to No. XXI. inclusive, were edited by the proprietors themselves. Mr Scott then withdrew from all connection with the Journal ; and, from that time, it was continued under the management of the three remaining proprietors, down to the 53d number, published on the 1st September 1837.

“ From the first moment of the undertaking, the proprietors have been actuated solely by the desire to cultivate and extend the knowledge of what they considered to be a science fraught with the most beneficial consequences to the human race ; and they have endeavoured to accomplish this end in that spirit of moral and intellectual purity and peace which Phrenology so strongly inculcates on those who embrace its truths. Wherever they have fallen short of this aim, as in many instances they have done, it has been from the imperfection of their own faculties, and the unfavour-

able circumstances in which they were placed. From the beginning, all the proprietors have been actively engaged in professional pursuits, and could boast neither of pecuniary independence nor of literary leisure. The conducting of the *Journal*, therefore, was the work of those hours which professional men generally devote to pleasure and recreation. Far from being cheered in their labours by the hopes of gratifying their ambition, they were warned by their friends that they were laying a sure foundation for their individual ruin, by opposing public opinion with such marked determination. They were spurned as weak and mischievous enthusiasts, by the men who then took the lead in literature and science; some of whom, nevertheless, rather inconsistently put forth their most powerful efforts to extinguish them by argument and ridicule, and, where these failed, by misrepresentation. Amidst these difficulties, they were not sustained by the approbation even of any considerable body of followers animated by principles congenial to their own. The views of human nature brought to light by Phrenology were so new and unexpected, that few, even of the most enlightened minds, were prepared to embrace them. Their consequences were obviously important, but they were shrouded in so much obscurity, that the public shrunk back from investigating them. The conductors of the *Journal*, therefore, laboured amidst obstacles and discouragements of the most formidable description, and for many years the circulation of their work was so limited that they had the painful certainty of having few supporters in the world. It was only the consciousness of the purity and dignity of their motives, and an irresistible conviction of the importance of the cause in which they were engaged, that sup-

deemed. These facts are mentioned to enable the readers to form a proper estimate of the difficulties with which the conductors have had to contend, and having stated their case, they leave the value of their efforts to the verdict of the public; expressing only their sincere regret for any imperfections with which the work has been chargeable, and which they would have been happy in removing if it had been practicable for them to do so.

" Their reasons for transferring the publication to London, now when its success seems no longer problematical, are entirely personal, and do not imply any diminution either of zeal or confidence in the cause in which they have been so long engaged. In January 1837, Mr Robert Cox ceased to reside in Edinburgh, and his valuable assistance was withdrawn from superintending the printing of the work. Dr A. Combe was prevented by impaired health and his indispensable avocations from lending that aid which otherwise he would gladly have afforded. While Mr Simpson and Mr Combe were frequently called from home, to teach Phrenology and its applications in distant parts of the country. In these circumstances they could not ensure that regularity in the conducting and publication of the Journal which are essential to its success.

" They have now transferred the copyright and management of the work to a gentleman resident in the vicinity of the capital, whose contributions have often enriched its pages, and who has distinguished himself by his writings in other departments of science. They confidently believe that he will infuse into it fresh vigour, while he will preserve unimpaired those moral and practical qualities with which its past conductors have aimed at imbuing it.

" They return their warmest thanks to those readers, whose zeal in the cause has led them to continue their support through the season of difficulty, and respectfully solicit their future countenance to the work; at the same time, they pledge themselves still to lend their best assistance to the new Editor in rendering it worthy of approbation."

Mr Hewett C. Watson, of Thames-Ditton, was the purchaser of the copyright; and for three years he conducted the journal with great ability, and an improving circulation. At the close of the third volume of the New Series, however, he withdrew from the position of editor, for reasons stated in p. 386 of that volume; and, at the same time, the copyright was re-purchased by Mr George Combe. In January 1841, the editorial duties were resumed by Mr Robert Cox, who had again taken up his residence in Edinburgh; and under his management all the subsequent numbers of the Journal have appeared. In carrying on the work, he has not only been aided by the three former proprietors, but received many able contributions from other phrenologists, in England as well as Scotland, whose names have in general been prefixed to

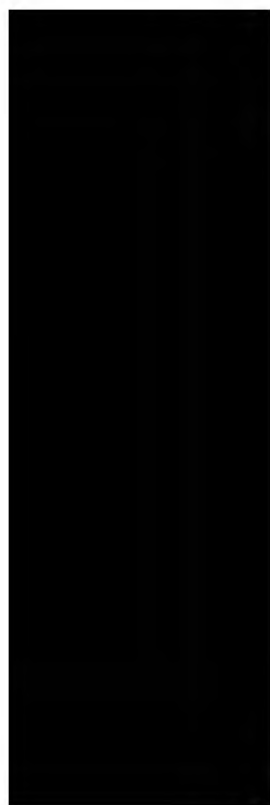


Among these may be mentioned—1st, the relief of duties which, for some years, heavier demands on his time and thoughts to be met without much inconvenience; 2d, the death of Dr Combe, without whose invaluable editor would feel himself inadequate to the main departments of his functions; and, 3d, the expectation that, in due time, a Third Series of the Journal will be more usefully and effectively conducted by a new generation of phrenologists, who, to freshen up the ardour and active energy which advancing health deny to those who, even within the field, had most of them attained the prime of life. After the labours of nearly a quarter of a century, they may now, perhaps, legitimately resign the good work into other, and, they hope, more skilful hands. Free from the impediment of a quarterly publication, they will not cease to exert the best of their ability, the strength and labour they may still find it possible to devote to the improvement by the aid of Phrenology.

In now suspending this publication, the Editors of the *Journal of Phrenology* in a very different condition find themselves. At present many of the great

throws on the subject of education. The influence of the writings of phrenologists on many subjects now agitating the public mind, will be most readily acknowledged by those who know most intimately the merits of these questions.

In this state of matters, however, the effect of the ridicule and opposition with which Phrenology was treated during the first ten years of our labours is now painfully apparent. While there is a growing conviction in the public mind that it is true and of great utility, and an increasing desire to obtain the practical advantages which it affords, there are comparatively few individuals who are sufficiently acquainted with it to be able either to teach it or to reap from it important advantage. By that ridicule the students of those days were deterred from devoting serious attention to the science; and the consequence is, that a generation of medical practitioners is now in the field, who have been educated since our labours commenced, and who possess no such knowledge of Phrenology as to qualify them to judge of its merits, or to impart to others the benefits which it is calculated to bestow. We regret to add, that, notwithstanding the endowment of a lectureship of Phrenology in Anderson's University at Glasgow, two years ago, by Henderson's Trustees, the medical students of that institution have availed themselves but little of the excellent opportunity thus presented to them of gaining phrenological knowledge; and that, in consequence of a report from the lecturer to this effect, the endowment has, after a trial of two sessions, been withdrawn, and the course will not for the present be repeated. We cannot doubt, however, that a farther advance in the general appreciation of Phrenology will present sufficient motives to a future generation of medical students to devote to the subject that minute and earnest attention without which it cannot be sufficiently mastered or adequately applied.





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